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SECRETARY OF STATE
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ADMINISTRATIVE LAW DIVISION

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OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

NOTICE OF A COMMENT PERIOD ON A PROPOSED RULE

Department of Commerce, Labor
and Environmental Resources

AGENCY: _____ TITLE NUMBER: 47

RULE TYPE: Legislative; CITE AUTHORITY W.Va. Code § 20-5F-4

AMENDMENT TO AN EXISTING RULE: YES _____ NO X

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: 38B

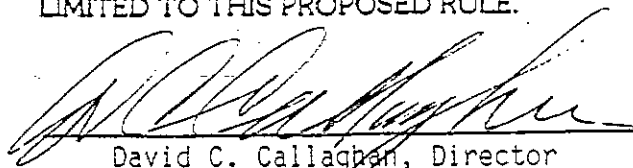
TITLE OF RULE BEING PROPOSED: "Industrial Solid Waste Regulations"

IN LIEU OF A PUBLIC HEARING, A COMMENT PERIOD HAS BEEN ESTABLISHED DURING WHICH
ANY INTERESTED PERSON MAY SEND COMMENTS CONCERNING THESE PROPOSED RULES. THIS
COMMENT PERIOD WILL END ON September 18 1992 AT 4:30pm

ONLY WRITTEN COMMENTS WILL BE ACCEPTED AND ARE TO BE MAILED TO THE FOLLOWING
ADDRESS.

Waste Management Section
1356 Hansford St.
Charleston, W.Va. 25301
Attn: Mike Comer

THE ISSUES TO BE HEARD SHALL BE
LIMITED TO THIS PROPOSED RULE.


David C. Callaghan, Director
Division of Environmental Protection

ATTACH A **BRIEF** SUMMARY OF YOUR PROPOSAL

18-90



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
OFFICE OF THE SECRETARY
State Capitol, Room R-151
Charleston, West Virginia 25305-0310
Telephone: (304) 558-3255
Fax No.: (304) 558-4983

GASTON CAPERTON
Governor

JOHN M. RANSON
Cabinet Secretary

August 17, 1992

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1992 AUG 17 PM 11:30
OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

Mr. David C. Callaghan, Director
Division of Environmental Protection
#10 McJunkin Road
Nitro, West Virginia 25143-2506

RE: Proposed Rule - Title 47, Series 38B (Industrial
Solid Waste Management Regulations)

Dear Dave:

Pursuant to West Virginia Code 5F-2-2(a)(12), I hereby
consent to the proposal of the rule specified above.

You may attach a copy of this letter to your filing
with the Secretary of State as evidence of my consent.

Sincerely yours,

John M. Ranson
John M. Ranson
Cabinet Secretary

JMR:mcl

FISCAL NOTE FOR A PROPOSED RULE

Rule Title: Title 47, Series 38B, "Industrial Solid Waste Management Regulations"

Type of Rule: XX Legislative Interpretive Procedural

Agency: Department of Commerce, Labor and Environmental Resources, Division of Environmental Protection, Office of Waste Management.

Address: 1356 Hansford Street, Charleston, West Virginia 25301.

1. Effect of Proposed Rule	Increase \$	ANNUAL		Current \$	FISCAL YEAR	
		Decrease \$			Next \$	Thereafter \$
Personal Services						
Current Expense						
Repairs and Alterations						
Equipment						
Other						

NO CHANGE

2. Explanation of Above Estimates: Today's filing proposes a rule that will implement the division of existing regulations into two separate regulations. No new administrative expenditures are anticipated.

3. Objectives of These Rules: Objectives of this rule is to separate industrial and municipal landfill regulations. These two distinct types of landfills will be regulated under separate regulations.

4. Explanation of Overall Economic Impact of Proposed Rule.

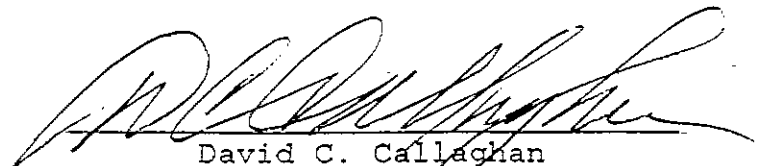
A. Economic Impact on State Government: No impact.

B. 1. Economic Impact on Political Subdivisions: No impact.

2. Economic Impact on Specific Industries: No impact.

3. Economic Impact on Specific Groups of Citizens: No impact.

C. Economic Impact on Citizens/Public at Large: No impact.


David C. Callaghan
Director

Date: August 17, 1992

PREAMBLE TO A PROPOSED RULE CONCERNING
INDUSTRIAL SOLID WASTE REGULATIONS

AGENCY: Department of Commerce, Labor, and Environmental Resources, Division of Environmental Protection, Office of Waste Management.

REGULATIONS: Title 47, Series 38B, "Industrial Solid Waste Management Regulations."

AUTHORITY: West Virginia Code §20-5F-4

ACTION: Filing a Proposed Rule with notice of a Thirty-Day Comment Period.

ADDRESS: Written comments can be sent to the following address:

DEP Rule Comments
1356 Hansford Street
Charleston, West Virginia 25301

Attn: Michael E. Comer

DATES: No written comments will be accepted after September 18, 1992 at 4:30 p.m.

SUMMARY: Today's filing is requesting public comment on proposed Industrial Solid Waste Management Regulations. This regulation currently exists as Title 47, Series 38, "Solid Waste Management Regulations." Under the existing Solid Waste Management Regulations (hereinafter "Series 38"), the industrial and municipal solid waste facilities are mandated to comply with one, all encompassing regulation. Under the proposed Industrial Solid Waste Management Regulation (hereinafter "Series 38B"), only facilities classified as an industrial solid waste facility shall be mandated to comply with the regulation. All facilities classified as a municipal solid waste facility shall comply with the Municipal Solid Waste Management Regulations (hereinafter "Series 38A") which are also being proposed today.

The two regulations being proposed today (Series' 38A and 38B), when made effective, shall repeal and replace Series 38. The intent of this proposal is to regulate two distinct types of solid waste facilities under two sets of distinct regulations which will address the specific characteristics and allow for a more focused regulatory program concerning industrial and municipal solid waste facilities.

In October of 1991, the Legislature passed Senate Bill 18. The Bill amended Sections of the Solid Waste Management Act (W. Va. Code §20-5F et seq.). Consequently, those amendments are reflected in today's filing.

On October 9, 1991, the United States Environmental Protection Agency (EPA) promulgated revisions to the criteria for classification of solid waste disposal facilities and practices set forth in 40 C.F.R. Part 257. These revisions were developed in response to the 1984 Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act of 1976 (RCRA). Today's filing incorporates some of those amendments.

INDUSTRIAL SOLID WASTE MANAGEMENT REGULATIONS

<u>Section</u>	<u>Description</u>
1.....	General
1.1	Scope and Purpose
1.2	Authority
1.3	Filing Date
1.4	Effective Date
1.5	Repeal of Former Rule
1.6	Lawful Disposal of Solid Waste Required
1.7	Incorporation by Reference
2.....	Definitions (alphabetical order)
3.....	Solid Waste Facility and Permitting Requirements
3.1	Prohibitions
3.2	Location Standards
3.3	Approvable Facilities
3.4	Pre-siting Requirements For Class G Commercial Industrial Solid Waste Facilities
3.5	Facility Permits
3.6	Permit Application Fees
3.7	Permit Application Requirements
3.8	General Geologic and Hydrologic Submission Requirements
3.9	Existing Land Use and Environmental Assessment
3.10	Proposed Landfill Design
3.11	Landfill Liners
3.12	Identification and Characterization of Potential Burrow Sources for Landfills
3.13	Bonding and Financial Assurance
3.14	Background Investigation Disclosure Statement
3.15	Water Pollution Control Requirements
3.16	Specific Application and Permitting Requirements
3.17	Draft Permit
3.18	Permit Modification, Suspension, and Revocation
3.19	Transfer of Permit
3.20	Permit Renewal
3.21	Public Notice
3.22	Public Comments and Requests for Public Hearings
3.23	Public Hearings
3.24	Reopening of the Public Comment Period
3.25	Public Participation File
3.26	Public Availability of Information
3.27	Issuance and Effective Date of Permit
3.28	Permit Review by the Director
3.29	General Permits
3.30	Appeals
4.....	Landfill Performance Standards
4.1	Enforcement of Landfill Performance Standards
4.2	Assessment Fees
4.3	Operator Training and Certification

4.4	.....	Operations Manual
4.5	.....	Minimum Design Criteria for Landfills
4.6	.....	General Operational Requirements
4.7	.....	Acceptable Wastes
4.8	.....	Leachate Management
4.9	.....	Water Quality Standards
4.10	.....	Landfill Gas Management
4.11	.....	Monitoring
4.12	.....	Reporting
4.13	.....	Requirements for Class F Solid Waste Facilities
4.14	.....	Other Solid Wastes
5	.....	Other Solid Waste Facility Performance Standards
5.1	.....	Requirements for Incinerators
5.2	.....	Requirements for Transfer Stations
5.3	.....	Requirements for Recycling Facilities
5.4	.....	Construction/Demolition Waste
5.5	.....	Requirements for Beneficial Use of Coal Combustion By-Products
5.6	.....	Requirements for Uncommon or Miscellaneous Facilities
6	.....	Closure and Bond Release
6.1	.....	Permanent Closure
6.2	.....	Inactive Status
6.3	.....	Post-Closure Care
6.4	.....	Final Post-Closure Inspection
6.5	.....	Bond Forfeiture
6.6	.....	Release of Bonds
6.7	.....	Preservation of Remedies
7	.....	Open Dumps
7.1	.....	Prohibitions
7.2	.....	Protection of the Environment and the Public
7.3	.....	Schedules of Compliance for Open Dumps
7.4	.....	Enforcement
7.5	.....	Cooperation with the State Division of Highways
7.6	.....	Cooperation with the State Tax Division
7.7	.....	Cooperation with the State Health Division
7.8	.....	Cooperation with County and Regional Solid Waste Authorities
Appendix A	.....	Schedule of Solid Waste Facility Permit Application Fees

TITLE 47
LEGISLATIVE RULES
DEPARTMENT OF COMMERCE, LABOR AND ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

SERIES 38B
INDUSTRIAL SOLID WASTE MANAGEMENT REGULATIONS

§47-38B-1. General.

1.1. Scope and Purpose. -- This legislative rule establishes requirements for the siting, bonding, installation, establishment, construction, modification, operation, permitting and abandonment of any facility that processes, recycles, transfers, or disposes exclusively of industrial solid waste pursuant to W. Va. Code §§20-5F. This rule applies to any person who owns or operates such a solid waste facility or who is responsible for the processing, recycling, or disposal of such solid waste.

1.2. Authority. -- W. Va. Code §§20-5F-4, 20-5F-5, 20-5F-5b, 20-5F-5c, and 20-5F-5d.

1.3. Filing Date. --

1.4. Effective Date. --

1.5. Repeal of Former Rule. -- This legislative rule repeals and replaces 47 CSR 38 "Solid Waste Management Regulations" as filed and which became effective on May 1, 1990, with respect to facilities managing only industrial solid waste.

1.6. Lawful Disposal of Solid Waste Required. -- Industrial solid waste shall be disposed, processed, or treated only at permitted industrial solid waste facilities as described in Section 3 of these regulations.

1.7. Incorporation by Reference. -- Whenever federal or State statutes or regulations are incorporated into these regulations by reference, the reference is to the statute or regulation in effect on the filing date listed in section 1.3 of this regulation.

§47-38B-2. Definitions.

2.1. "Access Road" means all roads providing operational access to a solid waste facility from a road that is under federal, State, or local authority.

2.2. "Act" means the Solid Waste Management Act, W. Va. Code §20-5F, et seq.

2.3. "Active Portion" means that portion of a solid waste

landfill that has received waste within the past ninety days and has not been closed or final cover has not been applied.

2.4. "Applicant" means any person applying for a commercial solid waste facility permit or similar renewal permit and any person related to such person by virtue of common ownership, common management or family relationships as the Director of the Division of Environmental Protection may specify including the following: Spouses, parents and children and siblings.

2.5. "Approved Solid Waste Facility" means a solid waste facility which has a valid permit under the Act or which is otherwise authorized to conduct solid waste activities under the Act.

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

2.6.1. "Category I Nonfriable Material" means asbestos-containing materials such as packing, gaskets, asphalt roofing, and vinyl floor covering, containing one or more percent asbestos, which is not in poor condition and is not friable.

2.6.2. "Category II Nonfriable Material" means asbestos-containing material such as transite siding, transite roofing, and brittle vinyl floor covering, containing one or more percent asbestos, which is not friable but likely to become crumbled, pulverized, or reduced to powder during demolition or disposal.

2.7. "Background Investigation Disclosure Statement" means a required statement, on a form prescribed by the director, filed by the applicant or permittee of a solid waste facility, containing pertinent information for the conductance of a background investigation.

2.8. "Backhauling" means the practice of using the same container to transport solid waste to transport any substance or material used as food by humans, animals raised for human consumption or reusable item which may be refilled with any substance or material used as food by humans.

2.9. "Beneficial Use" means the legitimate use of solid waste or by-products as products or raw materials. The term includes, but is not limited to, use of such materials for construction, structural fill, road base, soil amendment, manufacturing materials, mine reclamation, or incorporation into a manufacturing process, use as an ingredient in a product and similar applications. Beneficial use shall not be deemed a solid waste disposal practice. All provisions of chapter twenty of the state code relative to the maintenance and protection of surface and groundwater remain applicable.

2.10. "Bond" means any performance bond or other form of financial assurance contemplated by W. Va. Code §20-5F-5b.

2.11. "Chief" means the chief of the Waste Management Section of Division of Environmental Protection or his authorized representative.

2.12. "Class F Industrial Solid Waste Facility" means any industrial solid waste disposal facility which is owned, operated or leased by an industrial establishment for the disposal of industrial solid waste created by that person or such person and other persons on a cost-sharing or nonprofit basis.

2.13. "Class G Commercial Industrial Solid Waste Facility" means any commercial solid waste facility which accepts only industrial solid waste generated by sources other than the owner or operator of the facility and shall not include an approved solid waste facility owned and operated by a person for the sole purpose of disposing of solid wastes created by that person or such person and other persons on a cost-sharing or nonprofit basis.

2.14. "Clean Water Act" or "CWA" means the Federal Water Pollution Control Act, as amended; 33 U.S.C. §1251 et seq.

2.15. "Coal Combustion By-Product Facility" means a facility for the disposal of coal combustion by-products, including coal combustion by-product landfills and coal combustion by-product disposal surface impoundments, and shall not include the legitimate beneficial use of coal combustion by-products.

2.16. "Coal Combustion By-Products" means the residuals, including fly ash, bottom ash, bed ash, boiler slag and flue gas emission control waste produced by coal-fired or coal/gas-fired electrical or steam generating units. For non-electrical steam generating units burning a combination of solid waste and coal, a carbon monoxide (CO) level of less than or equal to one hundred parts per million (100 ppm) on a 24-hour average basis is required for the by-products to meet this definition. The carbon monoxide level shall be calculated on a dry gas basis corrected to seven percent (7%) oxygen.

2.17. "Cover Material" means soil or other material, approved by the chief and used in a controlled manner to cover solid waste at solid waste disposal facilities.

2.18. "Director" means the director of the West Virginia Division of Environmental Protection or his authorized representative.

2.19. "Division" means the West Virginia Division of Environmental Protection.

2.20. "Endangered or Threatened Species" means any species of animal or plant that is listed by the federal government as endangered or threatened in 50 C.F.R. Part 17.

2.21. "Friable Asbestos" means any material containing more than one percent (1%) asbestos by weight that hand pressure can crumble, pulverize, or reduce to powder when dry.

2.22. "Groundwater" means the water occurring in the zone of saturation beneath the seasonal high water table, or any perched water zones.

2.23. "Incinerator" means any device used to accomplish the destruction of combustible refuse by burning in a furnace designed for that purpose. However, the term shall not include thermal devices in which solid waste is used as a fuel or for energy recovery where the device was designed and is operated for a purpose other than the destruction of solid waste.

2.24. "Industrial Solid Waste" means any solid waste resulting from mining, manufacturing, or industrial processes. Manufacturing or industrial processes, include, but are not limited to, those processes and activities carried on in factories, processing plants, refineries, slaughter houses, mills, tanneries, power generating plants, mines or mineral processing operations.

2.25. "Industrial Solid Waste Landfill" means any Class F or Class G solid waste facility at which land disposal of industrial solid waste occurs. The term "industrial solid waste landfill" does not include land application units, surface impoundments, or injection wells.

2.26. "Infectious Medical Waste" means medical waste which is capable of producing an infectious disease. Infectious medical waste shall be considered capable of producing an infectious disease if it has been, or is likely to have been, contaminated by an organism likely to be pathogenic to healthy humans, if such organism is not routinely and freely available in the community, and such organism has a significant probability of being present in sufficient quantities and sufficient virulence to transmit disease. Infectious medical waste includes the following materials:

2.26.1. "Animal Carcasses, Body Parts, Bedding and Related Wastes" means contaminated animal carcasses, body parts, and bedding of animals that are known to have been exposed to infectious agents during research, production of biologicals, testing of pharmaceuticals, or for any other reason;

2.26.2. "Blood and Blood Products" means liquid waste human blood and blood products in a free flowing or unabsorbed state;

2.26.3. "Cultures and Stock of Micro-organisms and

Biologicals" means discarded cultures, stocks, specimens, vaccines and associated items likely to have been contaminated by an infectious agent. Discarded etiologic agents are infectious medical waste. Wastes from the production biologicals and antibiotics likely to have been contaminated by an infectious agent are infectious medical waste;

2.26.4. "Isolation Wastes" means waste generated from the care of a patient who has or is suspected of having any disease listed as Class IV in "Classification of Etiologic Agents on the Basis of Hazard," published by the United States Centers for Disease Control;

2.26.5. "Pathological Wastes" means human pathological wastes, including tissues, organs, body parts and containers of body fluids, exclusive of those fixed in formaldehyde or another fixative;

2.26.6. "Sharps" means discarded articles that may cause punctures or cuts and that have been used in animal or human patient care or treatment, or in pharmacies or medical, research or industrial laboratories, including, but not limited to, hypodermic needles, syringes with attached needles, scalpel blades, lancets and broken glassware;

2.26.7. Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill of any infectious medical waste; and

2.26.8. Wastes contaminated by or mixed with infectious medical waste.

2.26.9. Infectious medical waste does not include the following materials:

2.26.9.a. Human remains and body parts being used or examined for medical purposes which are under the control of a licensed physician or dentist and are not abandoned materials;

2.26.9.b. Human remains lawfully interred in a cemetery or in preparation by a licensed mortician for such interment or cremation;

2.26.9.c. Used personal hygiene products, such as diapers, facial tissues and sanitary napkins;

2.26.9.d. Gauze and dressing material, containing small amounts of blood or other body secretions with no free flowing or unabsorbed liquid;

2.26.9.e. Hair, nails and extracted teeth;

2.26.9.f. Waste generated by veterinary hospitals, except for waste meeting the criteria found in Sections 2.26.1, 2.26.3 or 3.24.6 of this rule;

2.26.9.g. Infectious medical waste contaminated with radioactive waste which is subject to regulation as a radioactive waste;

2.26.9.h. Infectious medical waste contaminated with hazardous waste which is subject to regulation as a hazardous waste; and

2.26.9.i. Medical waste not capable of producing an infectious disease or infectious waste that has been rendered noninfectious.

2.26.9.j. Medical tubing and devices with a signed and dated certification by the facility which states: "I hereby certify under penalty of law that this waste is not infectious medical waste as defined in Solid Waste Management regulations, 47 CSR 38A and 38B."

2.27. "Karst Region" means a type of topography which is formed over limestone or dolomite by dissolution of the formation and is characterized by sinkholes, caves, and other karst features.

2.28. "Land Application" means the application of liquid wastes onto a soil surface or the incorporation of solid waste into the soil surface for treatment and disposal.

2.29. "Landfill" means a facility or part of one at which solid waste, or its residue after treatment, is intentionally placed in or on land, and at which solid waste will remain after closure. The term "landfill" does not include a land application unit, surface impoundment, solid waste disposal surface impoundment, or injection well.

2.30. "Leachate" means any liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

2.31. "Lift" means the vertical thickness of compacted solid waste and the cover material immediately above it.

2.32. "Liner" means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of solid waste, any constituents of such waste, or leachate and which complies with these regulations.

2.33. "Lower Explosive Limit" means the lowest percent by volume of a mixture of explosive gases which will propagate a flame

in air at twenty-five degrees centigrade (25 degrees C) and atmospheric pressure.

2.34. "Major Alluvial Aquifer" means an aquifer composed of alluvial materials located adjacent to the Kanawha River, Little Kanawha River, and Ohio River as depicted on Groundwater Hydrology of the Minor Tributary Basins of the Kanawha River, West Virginia; Groundwater Hydrology of the Little Kanawha River Basin, West Virginia; and Groundwater Hydrology of the Minor Tributary Basins of the Ohio River, West Virginia atlas.

2.35. "Major Domestic Use Aquifer" means an aquifer which serves as a domestic or public water supply serving at least an average of twenty five (25) individuals per day for at least sixty (60) days per year, or which has at least fifteen (15) service connections.

2.36. "Major Modification" is a modification to an approved permit in which a major change to the permit is to occur as specified in Section 3.18.2.b of these regulations.

2.37. "Open Dump" means any solid waste disposal which does not have a permit under W. Va. Code §20-5F and is not otherwise authorized by an order of the chief or director, or for which a valid permit application is not currently under agency review, which is in violation of state law, or where solid waste is disposed in a manner that does not protect the environment.

2.38. "Perennial Stream" means a stream or portion of a stream that flows continuously or that under normal conditions supports aquatic life whose life history requires residence in flowing water for a continuous period of at least six (6) months.

2.39. "Permittee" or "Operator" shall mean any person holding or executing a permit or who is otherwise authorized to conduct solid waste activities under the Act.

2.40. "Persistent Violation" means any recurring violation of the Act, these regulations, any permit term or condition, or any order of the chief or the director issued pursuant to the Act or these regulations which is identified during two or more consecutive inspections performed by the chief or the director and that is not undergoing remediation or corrective action at the time of the subsequent inspection.

2.41. "Person" or Persons" means any industrial user, public or private corporation, institution, association, firm or company organized or existing under the laws of this or any other state or country; State of West Virginia; governmental agency, including federal facilities; political subdivision: county commission, municipal corporation; industry; sanitary district; public service district; drainage district; soil conservation district; watershed improvement district; partnership; trust; estate; person or

individual; group of persons or individuals acting individually or as a group; or any legal entity whatever.

2.42. "Petroleum" means petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 lbs. per square inch absolute) and pipeline liquids. The term includes any refined petroleum products.

2.43. "Petroleum-contaminated soil" means any soil, dirt, rock or other earthen material which contains more than a de minimis (100 ppm of total petroleum hydrocarbons or less) amount of petroleum and which is not a hazardous waste.

2.44. "Point Source" means any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, vessel, landfill leachate collection, floating craft, or system from which pollutants are or may be discharged to the waters of the State.

2.45. "Post-Closure" means activities after the closure of a solid waste facility which are necessary to ensure compliance with the provisions of the Act and regulations promulgated thereunder including the application of final cover, grading, revegetation, groundwater monitoring, surface water monitoring, gas monitoring and control, leachate treatment, erosion control, and the abatement of any pollution or degradation to land, water, air, or other natural resources.

2.46. "Publicly-Owned Treatment Works" or "POTW" means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a state or municipality as defined by Section 502(4) of the Clean Water Act. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

2.47. "Q.A./Q.C." means quality assurance and quality control.

2.48. "Recycle" means the collection, separation, recovery and sale, or subsequent reuse of metals, glass, paper, and other discarded materials.

2.49. "Recycling Facility" means any solid waste facility for the purpose of recycling at which only presorted materials are accepted, and at which neither land disposal nor biological, chemical, or thermal transformation of solid waste occurs.

2.50. "Resource Recovery Facility" means any solid waste facility at which solid wastes are mechanically, biologically, chemically, or thermally transformed for the purpose of separating,

removing, or creating any material or energy for reuse or sale and at which land disposal of solid waste does not occur. Resource recovery facilities include composting plants, incinerators equipped with integral or separate heat recovery systems, and other such solid waste facilities not herein specified, and may include salvage yards.

2.51. "Salvage" means, but is not limited to, old or scrap copper, brass, rope, rags, batteries, paper, rubber, junked, dismantled, or wrecked machinery, machine or motor vehicles or any parts of any junked, dismantled or wrecked machinery, machines or motor vehicles, iron, steel and other old or scrap ferrous or nonferrous materials.

2.52. "Salvage Yard" means any place which is maintained, operated or used for the storing, keeping, buying, selling or processing of salvage, or for the operation and maintenance of a motor vehicle graveyard, at which only mechanical processing of solid waste takes place and where no solid waste is disposed of on site.

2.53. "Schedule of Compliance" means a list of activities approved or ordered by the chief or director, which may include dates or specified times for completion of each or all activities which, when completed, will result in a site, facility, or practice which is environmentally sound and conforms to the requirements of the Act, these regulations, or permit terms and conditions.

2.54. "Section" means the Section of Water Resources of the West Virginia Division of Environmental Protection or its designee.

2.55. "Sewage" means water-carried human or animal wastes from residences, buildings, industrial establishments, or other places together with such groundwater infiltration and surface waters as may be present.

2.56. "Sludge" means any solid, semi-solid, residue, or precipitate containing 20% solids or more by weight and separated from or created by a municipal, commercial, or industrial waste treatment plant, water supply treatment plant, or air pollution control facility, or any other such waste having similar origin.

2.57. "Solid Waste" means and garbage, paper, litter, refuse, cans, bottles, waste processed for the express purpose of incineration, sludge from a waste treatment plant, water supply treatment plant or air pollution control facility, other discarded material, including offensive and unsightly matter, solid, liquid, semisolid or contained liquid or gaseous material resulting from industrial, commercial, mining or community activities but does not include solid or dissolved material in sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources and have permits under Chapter

twenty, Article five-a of the West Virginia Code, or source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended, including any nuclear and by-product material considered by federal standards to be below regulatory concern, or a hazardous waste either identified or listed under Chapter twenty, Article five-e of the West Virginia Code, or refuse, slurry, overburden or other wastes or material resulting from coal-fired electric power or steam generation, the exploration, development, production, storage and recovery of coal, oil and gas, and other mineral resources placed or disposed of at a facility which is regulated under Chapter twenty-two, twenty-two-a or twenty-two-b of the West Virginia Code, so long as such placement or disposal is in conformance with a permit issued pursuant to such chapters. "Solid Waste" shall not include materials which are recycled by being used or reused in an industrial process to make a product, as effective substitutes for commercial products, or are returned to the original process as a substitute for raw material feed stock.

2.58. "Solid Waste Disposal" means the practice of disposing solid waste including placing, depositing, dumping, or throwing or causing to be placed, deposited, dumped, or thrown any solid waste.

2.59. "Solid Waste Disposal Surface Impoundment" means a natural depression or man-made excavation or diked area that is designed for the disposal of solid waste containing free liquids and that is not an injection well, landfill, land application unit, or a surface impoundment as defined in Section 2.61 of these regulations.

2.60. "Solid Waste Facility" means any system, facility, land, contiguous land, improvements on the land, structures, or other appurtenances or methods used for processing, recycling, or disposing of solid waste including landfills, transfer stations, incinerators, materials recovery facilities and other such facilities not herein specified. Such facility shall be deemed to be situated in the county where the majority of the spatial area of such facility is located.

2.61. "Special Waste" means waste such as, but not limited to chemicals and pesticides which do not meet hazardous waste criteria and are not regulated as hazardous waste, oil spill cleanup, underground storage site residues from cleanup (i.e., petroleum contaminated soils), properly treated pesticide containers, and contaminated food products and fabrics requiring supervised disposal at an approved solid waste facility for which approval by the director or chief would be required before a commercial municipal solid waste management facility could receive and dispose of the waste.

2.62. "State Water Pollution Control Act" means W. Va. Code

§20-5A, et seq.

2.63. "Structural Fill" means an engineered/designed and controlled homogeneous fill with a projected beneficial end use, spread in lifts not exceeding twelve (12) inches and compacted with proper power equipment, with each lift compacted to an in-situ density of at least 95% of the Standard Proctor maximum density at $\pm 2.0\%$ optimum moisture content as determined by ASTM Test Designation D698.

2.64. "Surface Impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area that is designed to hold an accumulation of contaminated surface runoff or leachate or both.

2.65. "Transfer Station" means a combination of structures, machinery, or devices at a place or facility where solid waste is taken from collection vehicles, temporarily placed or stored and then placed in other transportation units for movement to another solid waste management facility. This term does not apply to waste collection activities on-site at an industrial facility.

2.66. "Uppermost Significant Aquifer" means the first, uppermost aquifer encountered which is laterally persistent under the entire site and is free flowing throughout the year. This defines the aquifer which flows all twelve (12) months of the year and can be encountered under any given point on the permitted site.

2.67. "USGS" means the United States Geological Survey.

2.68. "Vector" means any insect, rodent, or other organism capable of directly or indirectly transmitting infectious diseases or pathogenic organisms from one person to another or from an animal to a person.

2.69. "Waste Management Unit Boundary" means the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a solid waste disposal facility. If the property contains more than one unit, the waste management boundary may be designated as the property boundary or by an imaginary line circumscribing the several regulated units.

2.70. "Water Resources," "Water," or "Waters" means any and all water on or beneath the surface of the ground, whether percolating, standing, diffused or flowing, wholly or partially within this State, or bordering this State and within its jurisdiction, and includes, without limiting the generality of the foregoing, natural or artificial lakes, rivers, streams, creeks, branches, brooks, ponds (except farm ponds, industrial settling basins and ponds and water treatment facilities), impounding reservoirs, springs, wells, watercourses, and wetlands.

2.71. "Wetlands" means those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that, under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

2.72. "7Q10" means the seven (7) consecutive day drought flow with a ten (10) year return frequency.

2.73. "100-Year Flood" means a flood of a magnitude equalled or exceeded once in one hundred (100) years.

§47-38B-3. Solid Waste Facility and Permitting Requirements.

3.1. Prohibitions. No person may establish, construct, operate, maintain, or allow the use of property for a solid waste facility within an area where there is a reasonable probability that the facility will cause:

3.1.1. An adverse impact upon wetlands, unless a Clean Water Act Section 404 permit has been issued for the solid waste facility;

3.1.2. An adverse impact upon any endangered or threatened species of animal or plant, unless specifically approved by the United States Fish and Wildlife Service;

3.1.3. A statistically significant adverse impact upon any surface water;

3.1.4. A statistically significant adverse impact upon groundwater quality;

3.1.5. A violation of surface water quality standards found in 46 CSR 1;

3.1.6. The migration and concentration of explosive gases in any facility structure, excluding the leachate collection system or gas control or recovery system components, or in the soils or air at or beyond the facility property boundary in excess of twenty-five percent (25%) of the lower explosive limit for such gases at any time; or

3.1.7. The emission of any air contaminant exceeding the limitations for those substances as set by the West Virginia Air Pollution Control Commission.

3.2. Location Standards. Unless otherwise approved by the director in writing, a person may not establish, construct, operate, maintain, or allow the use of property for a landfill in the following areas: Note: All distance measurements prescribed

in Section 3.2 of these regulations refer to distances as measured from the edge of the waste management unit boundary of a facility at the end of its active life.

3.2.1. Within three hundred (300) feet of any pond, natural or artificial lake, impounding reservoir, river, or perennial brook, branch, creek, or stream (facility drainage, sedimentation control structures, industrial settling basins and ponds, and water treatment facilities are exempt from this distance calculation);

3.2.2. Within three hundred (300) feet of any wetlands (facility drainage or sedimentation control structures are exempt from this distance calculation);

3.2.3. Within a perennial stream;

3.2.4. Within a 100-year floodplain;

3.2.5. Within one thousand (1,000) feet of the nearest edge of the right-of-way of any state trunk highway, interstate or federal aid primary highway, or the boundary of any public park unless the facility is screened by natural objects, plantings, fences, or other appropriate means so that it is not readily visible from the highway or park;

3.2.6. Within two hundred (200) feet of known faults that have had displacement in Holocene time (i.e., during the last eleven thousand years);

3.2.7. Within ten thousand (10,000) feet of any airport runway used or planned to be used by turbojet aircraft or within five thousand (5,000) feet of any airport runway used only by piston type aircraft or within other areas where a substantial bird hazard to aircraft would be created;

3.2.8. Within five hundred (500) feet of a dwelling occupied at the time of initial facility siting, unless written permission is received from the owner of the dwelling;

3.2.9. Within twelve hundred (1,200) feet of any public or private water supply spring or well in existence at the time of initial facility siting.

3.2.10. Within one thousand (1,000) feet of any area considered by the director to be unmonitorable due to extreme geologic and hydrologic conditions (e.g., immaturely to maturely developed karst terrain, solution cavities);

3.2.11. Above deep-mine workings or within the critical angle of draw of such workings, unless otherwise approved by the director in writing; or

3.2.12. Within surface mined areas, unless otherwise approved by the director in writing.

3.3. Approvable Solid Waste Facilities. Solid waste facilities for which approval may be granted under these rules include the following, or any combination thereof:

3.3.1. Class F Industrial Solid Waste Facility;

3.3.2. Class G Commercial Industrial Solid Waste Facility;
or

3.3.3. Other solid waste facilities approved in writing by the director.

3.4. Pre-Siting Requirements for Class G Commercial Industrial Solid Waste Facilities.

3.4.1. In order to obtain a permit to construct and operate a Class G Commercial Industrial Solid Waste Facility in this State after June 10, 1989, a person shall:

3.4.1.a. Publish a Class II legal advertisement in a qualified newspaper, as defined in W. Va. Code §59-3-1, serving the county in which the proposed facility is to be located. This legal advertisement shall include:

3.4.1.a.A. A description of the location or locations at which the proposed facility may be sited;

3.4.1.a.B. Statement of the anticipated size of the proposed facility, in acres; and

3.4.1.a.C. An estimate of the volume, type, and origin of solid waste to be handled at the proposed facility;

3.4.1.b. File a pre-siting notice with the director within five (5) days of the publication of the legal advertisement required under Section 3.4.1.a. of these regulations. The pre-siting notice shall include:

3.4.1.b.A. A certification of publication of the legal advertisement required under Section 3.4.1.a. of these regulations from the newspaper in which such advertisement was published;

3.4.1.b.B. A description of each location at which the proposed facility may be sited;

3.4.1.b.C. A United States Geological Survey (USGS) topographic map showing the location and anticipated boundaries of each site being considered for the proposed facility;

3.4.1.b.D. An estimate of the volume, type, and origin of solid waste to be handled at the proposed facility; and

3.4.1.b.E. Other information required by the director; and

3.4.1.c. Provide a copy of the pre-siting notice to the appropriate county or regional solid waste authority or county commission within five (5) days of the publication of the legal advertisement required under Section 3.4.1.a. of these regulations.

3.4.2. The director shall hold a public hearing on the contents of the pre-siting notice. Such public hearing shall be conducted in accordance with the provisions of Section 3.23 of these regulations.

3.4.3. Based on comments received at the public hearing or received in writing within ten (10) days following the public hearing, the director may require the person who submitted that notice to furnish additional information on the siting of the proposed facility. Such additional information may include, but not be limited to, the following:

3.4.3.a. Impacts upon transportation facilities;

3.4.3.b. Impacts upon public water supplies;

3.4.3.c. Impact upon land use patterns;

3.4.3.d. Impacts upon agricultural, commercial and residential real estate values;

3.4.3.e. Impacts upon wildlife;

3.4.3.f. Impacts upon endangered or threatened species of animals or plants;

3.4.3.g. Impacts upon aesthetics;

3.4.3.h. Impacts upon socioeconomic conditions;

3.4.3.i. Impacts to water resources; and

3.4.3.j. Other impacts as determined by the director.

3.5. Facility Permits.

3.5.1. Permit Required. A permit must be obtained from the chief prior to the installation, establishment, construction, modification, operation, or closure of any Industrial Solid Waste Facility.

3.5.2. Single Document. Permits issued pursuant to these regulations shall meet the requirements of W. Va. Code §§20-5A and 20-5F and all associated regulations and only one document for any solid waste facility will be issued by the chief.

3.5.3. Term of Permit. All permits issued pursuant to these regulations shall have a fixed term not to exceed five (5) years from the date of issuance. The chief may administratively extend any permit expiration date for a period of up to one (1) year. In the case of closure permits, where no changes in the conditions of the permit are expected to occur, permits shall be renewed pursuant to Section 3.20 every five years through the termination of post-closure obligations, following the issuance of public notice pursuant to Section 3.21 and a thirty (30) day written comment period. Within 180 days of the expiration of the permit the owner or operator shall notify the chief whether such changes have occurred at the site and shall submit any additional information requested by the chief. For those permitted facilities where no changes have occurred or are being proposed and there are no outstanding violations the chief may, upon request, waive requirements of Subsection 3.20.1.

3.5.4. Existing Permits. A person who, on the effective date of these regulations, holds a valid Division permit to conduct a Class G Commercial Industrial Solid Waste activity must submit a request to the chief for a modification of that permit, in accordance with the provisions of Section 3.18 of these regulations, so that the applicable provisions of these regulations can be incorporated into the terms and conditions of the existing permit. The permit modification request shall be submitted within ninety (90) days of the effective date of these regulations.

3.5.5. Existing Class F and G Solid Waste Disposal Facilities. Facilities in existence on November 4, 1988, must submit a permit application as required by these rules within one hundred eighty (180) days prior to the date of expiration of any current Division permit governing the facility or upon request by the chief if the facility is operating under some other authorization of the director or if such time period has already run.

3.5.6. Processing of Application. Upon receipt of a complete permit application, as required by these rules, the Division shall have no more than one hundred eighty (180) days to grant or deny the permit. Provided, however that this time limit may be extended by the chief documenting in a letter to the applicant, when the applicant is not the cause of the additional required time, the reason additional processing time is required.

3.5.6.a. A complete permit application shall consist of all applicable information as required in Sections 3.6 through 3.16 of these regulations

3.6. Permit Application Fees.

3.6.1. Each application for a Class F or G solid waste facility permit must be accompanied by a nonrefundable application fee in accordance with the schedule of fees in Appendix A of these regulations.

3.6.2. A fee equal to ten percent (10%) of the application fee listed in Appendix A of these regulations must accompany a permit application refiled due to incompleteness.

3.7. Permit Application Requirements. A permit shall be obtained from the chief prior to the installation, establishment, construction, modification, operation, or closure of any Industrial Solid Waste Facility. Unless otherwise specified in these regulations or on application forms prescribed by the director, all applications for any Industrial Solid Waste Facility permit must include the following:

3.7.1. Forms and Number of Copies. The application shall be made on the forms prescribed by the chief. Five copies of the application, including all supporting documents, shall be submitted to the chief; for Class G facilities a sixth copy shall be submitted to the county or regional solid waste authority for the area in which the proposed facility is to be located.

3.7.2. Property Rights. The application shall provide a description of the legal documents upon which the applicant bases his legal right to enter and conduct operations on the solid waste facility permit area and whether that right is the subject of pending court litigation.

3.7.3. Certification. All application documents related to engineering and design plans and specifications shall be compiled, signed, and sealed by a professional engineer who is registered to practice in West Virginia;

3.7.4. Cover Letter. The application shall include a letter detailing the desired Division action or response.

3.7.5. Table of Contents. The application shall include a table of contents listing all sections of the submittal.

3.7.6. Visuals. The applications shall include appropriate maps, figures, photographs, and tables to clarify information or conclusions. The visuals must be legible. All maps, plan sheets, drawings, isometrics, cross-sections, and aerial photographs shall:

3.7.6.a. Be no smaller than eight and one-half inches by eleven inches (8-1/2" x 11") and, if larger, shall be folded to eight and one-half inches by eleven inches (8-1/2" x 11");

3.7.6.b. Be of appropriate scale to show all required details in sufficient clarity;

3.7.6.c. Be numbered, referenced in the narrative, titled, have a legend of all symbols used, contain horizontal and vertical scales, where applicable, and specify drafting or origination dates;

3.7.6.d. Use uniform scales;

3.7.6.e. Contain a north arrow;

3.7.6.f. Use USGS datum as a basis for all elevations;

3.7.6.g. Contain a survey grid with maximum dimension of two hundred (200) feet square, unless otherwise approved by the chief, based on monuments established in the field which is referenced to State plane coordinates;

3.7.6.h. Show original topography and the grid system on plan sheets showing construction, operation, or closure topography; and

3.7.6.i. Show survey grid location and reference major plan sheets on all cross-sections. A reduced diagram of a cross-section location plan view map shall be included on the sheets with the cross-section.

3.7.7. Quality Assurance and Quality Control Plans. The application shall include quality assurance and quality control (Q.A./Q.C.) plans to be implemented to assure conformity of the solid waste facility construction and monitoring with applicable standards.

3.7.7.a. The Q.A./Q.C. plans shall include a delineation of the quality assurance and quality control management organization, including the chain of command of the Q.A./Q.C. inspectors and contractors;

3.7.7.b. The Q.A./Q.C. plans shall include a description of the required level of experience and training for the contractor, his crew, and Q.A./Q.C. inspectors for every major phase of construction in sufficient detail to demonstrate that the installation methods and procedures required in these regulations will be properly implemented;

3.7.7.c. The Q.A./Q.C. plans shall include a description of the quality assurance and quality control testing procedures for every major phase of construction. At a minimum, these Q.A./Q.C. testing procedures shall include:

3.7.7.c.A. The frequency of inspection, field testing,

and sampling for laboratory testing;

3.7.7.c.B. The sampling and field testing procedures and equipment to be utilized;

3.7.7.c.C. The calibration of field testing equipment;

3.7.7.c.D. The frequency of performance audits;

3.7.7.c.E. The sampling size;

3.7.7.c.F. The soils or geotechnical laboratory to be used;

3.7.7.c.G. The laboratory procedures to be utilized;

3.7.7.c.H. The calibration of laboratory equipment;

3.7.7.c.I. The laboratory's Q.A./Q.C. procedures;

3.7.7.c.J. The limits for test failure; and

3.7.7.c.K. A description of the corrective procedures to be used upon test failure; and

3.7.7.d. The Q.A./Q.C. plans shall include a description of the quality assurance and quality control sampling and analysis procedures. At a minimum, these Q.A./Q.C. procedures shall encompass the sampling and analysis of groundwater, surface water, leachate, and gas (if applicable) required under these regulations.

3.7.8. Technical Procedures. All technical procedures used to investigate a solid waste facility shall be the current standard procedures as specified by the American Society for Testing Materials or by the United States Geological Survey or other equivalent, appropriate methods approved by the chief.

3.7.8.a. All technical data submitted in the application shall be accompanied by the names of persons or organizations that collected or analyzed the data, the dates of the collection, and an analysis of the data and description of the methodology used to collect and analyze the data.

3.7.9. Endangered Species and Historic Sites. The application shall include a letter from the Division's Section of Wildlife Resources addressing the known presence of any endangered or threatened species of animals or plant in the vicinity of the proposed facility. The application shall also include a letter from the West Virginia Division of Culture and History addressing the presence of any known historical, scientific, or archaeological areas in the vicinity of the proposed facility.

3.7.10. Bonding and Financial Assurance. Sufficient bond shall be submitted to the Division in compliance with the provisions of Section 3.13 of these regulations for Class G Commercial Industrial Solid Waste Facilities.

3.7.11. Background Investigation Disclosure Statement. The application for a Class G Commercial Industrial Solid Waste Facility shall include the name of the applicant or any officer, director, or manager thereof; shareholder owning five percent (5%) or more of its capital stock, beneficial or otherwise; or other person conducting or managing the affairs of the applicant or the proposed licensed premises and must be submitted to the director in compliance with Section 3.14 of these regulations.

3.7.12. Facility Expansion. In an application for an expansion of an existing facility, the effectiveness of the existing design and operation shall be discussed. An evaluation of relevant monitoring data and a discussion of all plan modifications and remedial actions shall be included in the application. Any significant adverse impacts to the waters of the State or to any endangered or threatened species of animal or plant that could result from the expansion shall also be noted and discussed.

3.7.13. Waste Reduction and Recovery Information. The application shall include a discussion of the alternatives to the facility, as well as a description of any waste reduction incentives and recycling services to be instituted or provided with the proposed facility as contained in Section 3.7.13 of these regulations.

3.7.13.a. Waste Types, Origins, and Quantities. The application shall include a brief description of the types, origins, and quantities of commercial, industrial construction/demolition, and other wastes anticipated to be accepted at the proposed facility and a calculation of waste quantities by composition based on State-estimated figures or other data if readily available.

3.7.13.b. Description of Technologies. The application shall include a brief description of the technologies and methodologies of waste reduction, reuse, recycling, composting and energy recovery as applicable to the wastes anticipated to be accepted at the proposed facility.

3.7.13.c. Ongoing Program. The application shall include a brief description of any known waste reduction or recovery programs in the area to be served by the proposed facility that handle the type of waste anticipated to be accepted at the proposed facility, including a description of their potential for expansion.

3.7.13.d. Recommendations. The application shall include a brief description of any recommendations for waste reduction and

recovery in the approved area-wide solid waste management plan for all counties within the area-wide plan .

3.7.13.e. Current Studies. The application shall include a brief description of any known waste reduction or recovery studies being conducted for wastes anticipated to be accepted at the proposed facility.

3.7.13.f. Available Recovery Markets. The application shall include a description of the nearest available markets for recoverable material from the waste anticipated to be accepted at the proposed facility including:

3.7.13.f.A. Market name and address;

3.7.13.f.B. Market requirements for minimum quantities and preparation for deliverable material; and

3.7.13.f.C. Prices paid for materials, including both current prices and ranges for the past three (3) years, if available to the public.

3.7.13.g. Potential Energy Markets. The application shall include a brief description of energy users within the service area capable of using at least twenty-five percent (25%) of the energy available in the waste stream anticipated at the proposed facility or for the energy available from a minimum of twenty-five (25) tons of waste per day, whichever is greater. At a minimum, consideration must be given to both electrical generation and to steam production.

3.7.13.h. Future Effects. The application shall include a brief description of any efforts to be implemented to either assist in the expansion of existing waste reduction and recovery programs or to develop new programs for waste reduction and recovery.

3.7.14. Geotechnical Information. The application shall include an analysis of the geologic, hydrogeologic, topographic, and hydrologic features of the facility site that may be favorable or unfavorable for facility development in compliance with the requirements of Section 3.8 of these regulations.

3.7.15. Identification and Characterization of Potential Borrow Sources. The application shall include an identification and characterization of the potential borrow sources as detailed in Section 3.12 of these regulations.

3.7.16. Proposed Design and Operation. The application shall include a proposed design based on conclusions outlined in the construction design section of the application as designated in Section 3.10 of these regulations. A general discussion of the

proposed operating procedures must also be included.

3.7.17. Landfill Liners. The application shall include plans, drawings, cross-sections, and specifications for a liner system as designated in Section 3.11 of these regulations, or as otherwise required by these regulations.

3.7.18. Verification of Application. The application shall include a notarized signature of a principal officer, or ranking public official, verifying that the information contained in the application is true and correct to the best of that individual's knowledge and belief.

3.8. General Geologic and Hydrologic Submission Requirements.

3.8.1. Site Information. The application shall include the following information regarding the potential site:

3.8.1.a. Total acres of site;

3.8.1.b. Total acres of disposal area;

3.8.1.c. Planned life of facility;

3.8.1.d. Previous existence of a mine or quarry at the site;

3.8.1.e. A 7.5 minute USGS topographic map, or an eight and one-half inch by eleven inch (8-1/2" x 11") copy of a portion thereof, showing:

3.8.1.e.A. The site and its boundaries;

3.8.1.e.B. The area surrounding the site for at least fifteen hundred (1,500) feet beyond the site boundaries;

3.8.1.e.C. The name of the quadrangle;

3.8.1.e.D. The date of last map revision;

3.8.1.e.E. The latitude and longitude of the center of the site; and

3.8.1.e.F. The location of the items listed in Section 3.8.1.1 of these regulations, unless such items are instead shown on the large-scale map;

3.8.1.f. A description of the site location;

3.8.1.g. A description of the site terrain;

3.8.1.h. A description of any title, deed, or usage

restrictions affecting the proposed permit area;

3.8.1.i. The name of the town nearest to the site;

3.8.1.j. The name of the county in which the site is located;

3.8.1.k. A large-scale map -- with a minimum scale of one inch equal to two hundred feet (1 inch = 200 feet) and a maximum contour interval of ten (10) feet, unless otherwise approved by the chief, -- showing the location of the items listed in Section 3.8.1.1 of these regulations, unless such items are instead shown on the 7.5 minute topographic map;

3.8.1.1. All of the following which occur either within the site boundaries or within fifteen hundred (1,500) feet of the site boundaries must be indicated on the large-scale map or the 7.5 minute topographic map or both. If the information is unavailable for justifiable reasons, documentation of efforts to obtain it must be included;

3.8.1.1.A. Water supply wells;

3.8.1.1.B. Springs;

3.8.1.1.C. Wetlands (e.g., swamps, bogs, marshes);

3.8.1.1.D. Streams;

3.8.1.1.E. Public water supplies;

3.8.1.1.F. Other bodies of water;

3.8.1.1.G. Underground or surface mine;

3.8.1.1.H. Mine pool discharges;

3.8.1.1.I. Mine spoil piles;

3.8.1.1.J. Quarries or sand and gravel pits;

3.8.1.1.K. Gas and oil wells;

3.8.1.1.L. Water quality monitoring points;

3.8.1.1.M. Occupied dwellings;

3.8.1.1.N. Roads;

3.8.1.1.O. Power lines and pipelines;

3.8.1.1.P. Public buildings;

- 3.8.1.1.Q. Sinkholes and other karst features;
- 3.8.1.1.R. Property boundaries;
- 3.8.1.1.S. Owners of record both surface and subsurface;
- 3.8.1.1.T. Easements or right-of-ways; and
- 3.8.1.1.U. One hundred (100) year flood plain boundary.

3.8.2. Soils Information. Backhoe test pits or drilled test borings shall be employed to determine soil types, characteristics, and conditions. A minimum of four (4) test pits or borings for the first ten (10) or less acres and one (1) test pit or boring for each additional ten (10) or less acres must be excavated or drilled on a uniform grid pattern across the site and each proposed borrow source. Test pits or borings for all Industrial Solid Waste Facilities shall be located so as to identify all soil types distributed over the site. The applicant shall provide the following:

3.8.2.a. A list of each soil series and phase present on the site and each borrow source and soil maps with site and borrow source boundaries as an attachment;

3.8.2.b. The locations of all test pits or borings made to describe soils and determine their depth;

3.8.2.c. A description of soil horizons containing seventy-five percent (75%) or more coarse fragments (as per the United Soil Classification System) including:

3.8.2.c.A. Minimum thickness of soil to horizons with seventy-five percent (75%) or more coarse fragments;

3.8.2.c.B. Soil thickness determination procedures;
and

3.8.2.c.C. Degree of weathering of coarse fragments.

3.8.2.d. Test pit or excavation descriptions including depth to all horizons, color, texture, structure, consistence, depth to and color of any mottles;

3.8.2.e. Results of laboratory analyses of soil samples taken from test pits or borings including analyses for grain size, Ph, permeability, and Atterberg limits for predominate soil types; and

3.8.2.f. A description of the following general soil characteristics;

3.8.2.f.A. Drainage characteristics of soil;

3.8.2.f.B. Maximum slopes at the proposed site; and

3.8.2.f.C. Shallowest depth from surface to mottling.

3.8.2.g. A minimum of four (4) representative samples for the first ten (10) or less acres and one (1) additional sample for each additional ten (10) or less acres must be tested for the relationship of water content to dry density using either the Modified or Standard Proctor method. Each Proctor curve must be developed with a minimum of five (5) points.

3.8.2.h. A minimum of twenty percent (20%) of the samples used to develop the Proctor curves must be used to evaluate soil permeability. This evaluation must be accomplished by determining the maximum density and optimum moisture through a Proctor test (D-698) and then testing for permeability at a dry density between ninety-five percent (95%) and one hundred percent (100%) of the maximum and within four percent (4%) of optimum moisture.

3.8.3. Site Geological Information. A minimum of four (4) test corings shall be performed at any landfill site with a permitted surface area of ten (10) or less acres and one (1) additional test coring performed for each additional five (5) acres up to one hundred fifty (150) acres, not to exceed fifteen (15) holes. Any acreage over one hundred fifty (150) acres shall require one (1) additional test coring per ten (10) or less acres. Such test corings shall be distributed over the entire site area to give an accurate description of subsurface conditions for the area of the site which is intended for use as a landfill. The depth at which coreholes shall terminate shall be determined by the following: the first coring shall be placed in the lowest point of the proposed disturbed area and cored to the upper most significant aquifer that is to be monitored or corings shall penetrate to a minimum depth of one hundred (100) feet in the absence of the aquifer. Upon the completion of drilling, drilling logs for all completed coreholes shall be submitted to the chief.

3.8.3.a. The site geological analysis should provide the following information:

3.8.3.a.A. Sediments.

3.8.3.a.A.(a) A notation of the presence of any sedimentary deposits under the proposed site including, but not limited to, colluvial, alluvial, or lacustrine;

3.8.3.a.A.(b) A description of the type and texture

of unconsolidated materials;

3.8.3.a.A.(c) The thickness of unconsolidated materials including the maximum, minimum, and how the thickness was determined procedurally; and

3.8.3.a.A.(d) A description of the different formations of unconsolidated materials and the effects of these sediments on potential discharges from the landfill;

3.8.3.a.B. Bedrock.

3.8.3.a.B.(a) The formations and names;

3.8.3.a.B.(b) The lithologies including major lithologic names in the area (e.g., Morgantown, Sandstone, Ames Limestone) plotted on the large-scale map;

3.8.3.a.B.(c) An indication of all areas where bedrock outcrops within the site and fifteen hundred (1,500) feet of the site boundaries on the large-scale map;

3.8.3.a.B.(d) A characterization of the degree of bedrock weathering;

3.8.3.a.B.(e) The shallowest depth from surface to bedrock; and

3.8.3.a.B.(f) For carbonate rock show any undrained depressions or sinkholes existent on site or within fifteen hundred (1,500) feet of the site shown on the large-scale map or the 7.5 minute topographic map or both;

3.8.3.a.C. Structure.

3.8.3.a.C.(a) An indication of all of the following types of fracture zones on-site and within fifteen hundred (1,500) feet of the site boundaries on the large-scale map or the 7.5 minute topographic map or both:

3.8.3.a.C.(a)(A) Traces;

3.8.3.a.C.(a)(B) Lineaments;

3.8.3.a.C.(a)(C) Joints; and

3.8.3.a.C.(a)(D) Faults.

3.8.3.a.C.(b) A brief description of the influence that these fracture zones have on the movement of infiltrated water and groundwater;

3.8.3.a.C.(c) A description of the regional bedrock structures in the area of the site;

3.8.3.a.C.(d) A detailed description of the local bedrock structure. Construct a structural geologic map with an appropriate scale using structural contour intervals. For bedrock dip at angles of zero to five degrees, contour intervals shall be five (5) feet; for angles of five to thirty degrees, contour intervals shall be ten (10) feet; and for angles of greater than thirty (30) degrees, contour intervals shall be twenty-five (25) feet. Use of intermediate contours in areas of low structural relief for greater detail is required;

3.8.3.a.C.(e) A description of folding as it applies to the site including strike and plunge of fold axis and location of the site in relation to the local structure;

3.8.3.a.C.(f) The strike and dip of bedding planes;

3.8.3.a.C.(g) A description of the joints and fractures including strike, dip, and open joints and a description of the spacing of the joints;

3.8.3.a.C.(h) A description of all faults located on or within fifteen hundred (1,500) feet of the site boundaries including the strike and dip of faults and an indication of all faults in the area of the site on a map; and

3.8.3.a.C.(i) A minimum of two (2) geologic profiles using bedrock outcrops and corehole information including the vertical exaggeration to adequately illustrate the geology of the site; and

3.8.3.a.D. Mining.

3.8.3.a.D.(a) A notation of the presence of any abandoned, reclaimed, active, or inactive surface mines on the site;

3.8.3.a.D.(b) A list of any extractable coal seams beneath the site;

3.8.3.a.D.(c) Any active or inactive deep mines located on-site or within fifteen hundred (1,500) feet of the site boundaries including minimum depth to mined area, aerial extent of mined area as shown, and type of minerals mined. (If coal, give the names of seams.); and

3.8.3.a.D.(d) Any mine maps or related information for mined areas under the site or within fifteen hundred (1,500) feet of the site boundaries.

3.8.4. Hydrologic Information. A minimum of four (4) monitoring wells shall be drilled to intersect the uppermost significant aquifer at all landfill sites. Monitoring wells -- one (1) upgradient and three (3) downgradient -- shall monitor the same aquifer. If previously drilled geologic corings are to be used as monitoring wells and the uppermost significant aquifer has been drilled through, then those holes proposed to monitor groundwater may be plugged from the bottom of the hole to the uppermost significant aquifer with a sodium bentonite grout, then properly screened and cased.

3.8.4.a. Groundwater monitoring wells shall meet the following specifications:

3.8.4.a.A. All monitoring well casings and screens shall be constructed of a minimum of two (2) inch (inner diameter) Schedule 40 polyvinylchloride (PVC) plastic pipe, or other casing satisfactory to the chief. Lengths of pipe shall be joined using threaded couplings. Borehole diameter shall be a minimum of six (6) inches larger than the PVC casing. If approved by the director, the borehole diameter may be smaller if proven methods are employed to facilitate the emplacement of the filter pack and annular sealant.

3.8.4.a.B. The screened interval for monitoring wells shall consist of ten (10) to a maximum of twenty (20) feet of properly sized, pre-constructed, commercially available well screen of the same material and diameter as the casing, or screen as approved by the chief. The bottom of the screen shall be capped. Should the uppermost aquifer thickness exceed twenty (20) feet or be comprised of several hydraulically connected formations, then a cluster of wells or some other type of multiple zone monitoring system may be required at the discretion of the chief.

3.8.4.a.C. All wells shall be sand or gravel-packed (depending on screen size) from the base of the well to a level a minimum of two (2) feet and a maximum of five (5) feet above the top of the screen, or other levels approved by the chief. An impervious two (2) foot or greater bentonite seal shall be installed on top of the sand or gravel packing.

3.8.4.a.D. All wells shall be continuously grouted from the top of the impervious seal to above the groundwater table. Wells shall not be grouted with cement below the potentiometric surface of the uppermost significant aquifer.

3.8.4.a.E. From below the frost line, the cap shall be composed of concrete (using expanding cement) blending into a four (4) inch thick apron extending three (3) feet or more from the outer edge of the borehole.

3.8.4.a.F. Upon completion, all wells shall be fully

developed to remove suspended materials and pumped to determine the yield of the well.

3.8.4.a.G. The elevation of the top of the well casing shall be two (2) to three (3) feet above the elevation of the ground surface.

3.8.4.a.H. All wells shall be properly tagged with permit number, top of casing elevation, well number, and flagged or otherwise made visible so they can be readily located in the field, and avoided by onsite heavy equipment.

3.8.4.a.I. All wells shall be provided with a means of protection from tampering, vandalism, or damage.

3.8.4.b. Well Drilling. The method used to drill the groundwater monitoring wells shall be described in the application. The latitude and longitude of each well to within plus or minus one second and the USGS datum elevation of the top of each well shall be included in the application.

3.8.4.c. Water Table. The maximum and minimum depth to the zone of saturation shall be included in the application.

3.8.4.c.A. Seasonal water table fluctuations at the above locations and seeps and springs affected by seasonal changes shall be described in the application.

3.8.4.c.B. Perched or special water table conditions shall be described in the application.

3.8.4.c.C. The minimum depth to a perched water table shall be provided in the application.

3.8.4.c.D. The occurrence of groundwater drainage to deep mines shall be determined and, if found, mine discharges must be identified on the large-scale map or the 7.5 minute topographic map or both, as required under Section 3.8.1.1 of the these regulations.

3.8.4.d. Groundwater Movement.

3.8.4.d.A. A large-scale map of an appropriate scale acceptable to the chief showing all groundwater flow directions shall be constructed and included in the application. The water table/potentiometric surface shall be contoured on this map using an appropriate contour interval.

3.8.4.d.B. The approximate rate of groundwater flow and the method used to determine that flow shall be provided in the application.

3.8.4.d.C. The method used to determine groundwater flow directions shall be included in the application.

3.8.4.d.D. The location of all groundwater discharge points related to the site shall be shown on the large-scale map required under Section 3.8.4.d.A. of these regulations.

3.8.4.d.E. If the site is in a groundwater discharge or recharge zone, this fact shall be noted in the application.

3.8.4.d.F. The rate of groundwater flow at the site and its effects on the operation of the proposed facility shall be discussed in the application.

3.8.4.e. Groundwater Quality Analyses. The results of an analysis of the water from each groundwater monitoring well at the site shall be provided in the application. All sampling must be conducted using sampling procedures approved by the chief. Analyses for the following parameters shall be conducted: alkalinity, ammonia nitrogen, arsenic, barium, bicarbonate, biochemical oxygen demand (BOD-5 day), cadmium, calcium, chemical oxygen demand (COD), chloride, chromium, cyanide, iron, lead, manganese, magnesium, mercury, nickel, nitrate, pH, potassium, selenium, silver, sodium, sulfate, specific conductance, total dissolved solids (TDS), total organic compounds (TOC), total phenolic materials, total suspended solids (TSS), zinc, and any other parameter specified by the chief in writing. In addition to the above parameters, coal combustion by-product facilities shall analyze for the following: aluminum, antimony, beryllium, boron, copper, fluoride, hexavalent chromium, molybdenum, thallium, titanium, total phosphorus and vanadium. Any of the parameters in this section may be deleted from the analysis requirement upon approval of the chief.

3.8.4.e.A. The monitoring parameters listed in Section 3.8.4.e. of these regulations shall be reported as total metals unless otherwise specified by the chief.

3.8.4.f. Surface Water.

3.8.4.f.A. The name of the nearest stream to the site and its 7Q10 low flow shall be included in the application.

3.8.4.f.B. The surface drainage area of the tributary on which the site is located shall be plotted on a map and included in the application.

3.8.4.f.C. The estimated peak surface water drainage flow of the tributary on which the site is located for a 25-year, 24-hour rainfall event shall be included in the application.

3.8.4.f.D. The maximum and minimum of surface slopes

of the tributary on which the site is located shall be included in the application.

3.8.4.f.E. The results of an analysis of water from one (1) grab sample from the nearest stream to the site shall be included in the application. This analysis shall be performed for the same parameters listed in Section 3.8.4.e and 3.8.4.e.A of these regulations .

3.8.5. Water Budget. A water budget shall be prepared for the periods of time during active operations, when the maximum amount of area has been filled but not capped, and following facility closure at any landfill site. At a minimum, the following factors must be considered in the preparation of the water budget:

- 3.8.5.a. Average monthly temperature;
- 3.8.5.b. Average monthly precipitation;
- 3.8.5.c. Evaporation;
- 3.8.5.d. Evapotranspiration;
- 3.8.5.e. Surface slope and topsoil texture;
- 3.8.5.f. Soil moisture holding capacity and root zone depth;
- 3.8.5.g. Runoff coefficients;
- 3.8.5.h. Moisture contribution from the waste; and
- 3.8.5.i. Any groundwater contribution.

3.8.6. Liners and Leachate Collection System Efficiency. The collection efficiency of the leachate collection system at the landfill shall be calculated using an approved analytical or numerical method. The factors to be considered in the calculation of collection efficiency must include:

- 3.8.6.a. The saturated hydraulic conductivity of the liner;
- 3.8.6.b. Liner thickness;
- 3.8.6.c. The saturated hydraulic conductivity of the drainage blanket;
- 3.8.6.d. Drainage blanket porosity;
- 3.8.6.e. The base slope of the liner;

3.8.6.f. The maximum flow distance across the liner;

3.8.6.g. Annual infiltration; and

3.8.6.h. Any groundwater inflow.

3.8.7. Leachate Generation. Information gained from the collection efficiency calculations shall be used to predict the daily volume of leachate collected from the landfill.

3.8.8. Waste and Leachate Characterization. Unless otherwise approved, the physical and chemical characteristics of all wastes and leachates shall be analyzed and described. When more than one waste is generated, testing shall be performed on each waste stream. All leaching tests shall be done in accordance with published test procedures. Physical tests shall be done in accordance with ASTM standards or published test procedures. All testing procedures shall be documented. The proposed testing program -- including the leaching test method, the leaching media, the parameters to be analyzed for, and the detection limits for each parameter specified -- should be discussed with the chief prior to initiation of the work. Actual field leachate data may be substituted for chemical characterization data of the waste at facilities for the disposal of industrial wastes only if approved in writing by the chief.

3.8.9. Liquid and Non-Liquid Waste Storage. All solid waste storage tanks, containers, liquid waste storage tanks and surface impoundments located at a solid waste facilities are subject to regulation under Section 3.8.9 of these regulations.

3.8.9.a. An application for a permit to construct and operate a solid waste facility which includes a waste storage area must contain the following:

3.8.9.a.A. A description of the non-liquid or liquid waste to be stored;

3.8.9.a.B. The estimated volume of the non-liquid or liquid waste generated and a proposed recordkeeping system to record actual quantities stored;

3.8.9.a.C. A schedule of stored waste removal;

3.8.9.a.D. A description of the final treatment and disposal of the stored waste; and

3.8.9.a.E. A description of the storage facility design.

3.9. Existing Land Use and Environmental Assessment.

3.9.1. Land Use Information. The application shall discuss the present and former land uses at the facility and the surrounding area. A thorough discussion of land uses which may have an impact upon the suitability of the property for waste disposal or affected groundwater quality shall be included in the application. The application shall address all areas that may affect or be affected by the proposed facility; at a minimum, this will be the area within one (1) mile of the permit area for Class G solid waste facilities and within one-half (1/2) mile of the permit for all other facilities. The presentation of land use information in the application shall be supplemented with land use maps and, at a minimum, shall specifically address the following:

3.9.1.a. Adjacent Landowners. The identity and location of the adjacent landowners must be determined. This information may be presented on a plat map but must check current ownership conditions and note any changes.

3.9.1.b. Land Use Zoning. The application shall review land use zoning in the area and give particular attention to areas where zoning variances will be required, where agricultural impact statements may be required, or where floodplain, river corridors, or wetlands are designated.

3.9.1.c. Documentation of Present Land Uses. The application shall include a description of the present land use in the area. Particular emphasis shall be placed on the discussion of known recreational, historical, archaeological, or environmentally unique areas. The application shall include a letter from the Division's Section of Wildlife Resources addressing the known presence of any endangered or threatened species of animal or plant in the vicinity of the proposed facility. The application shall include a letter from the West Virginia Division of Culture and History addressing the presence of any known historical, scientific, or archaeological areas in the vicinity of the proposed facility. The need for an archaeological survey of the proposed limits of waste fill prior to development shall also be addressed in the application.

3.9.1.d. Transportation and Access. Present and proposed transportation routes and access roads, including any weight restrictions, shall be delineated in the application.

3.9.2. Environmental Review. The application shall include an environmental assessment section which addresses the following items:

3.9.2.a. Project Summary. The application shall include a brief summary of the project, with particular attention given to the following:

3.9.2.a.A. The purpose and need for the proposed

facility including the history and background on the project;

3.9.2.a.B. A listing of the statutory authority and other relevant local, State, and federal permits or approvals required for the proposed facility as well as a discussion of the need for exemptions, zoning changes, and any other special permits; and

3.9.2.a.C. The estimated cost and funding source for the facility.

3.9.2.b. Proposed Physical Changes. The application shall include a brief description of the proposed physical changes that will result from the project, with particular attention given to the following:

3.9.2.b.A. The changes in terrestrial resources including the quantity of material to be excavated and the lateral extent of soil removal. This discussion must also cover the quantity and source of materials to be imported for construction of the liner, final cover system, drainage blanket and perimeter berms. Any other significant terrestrial modifications such as soil placement necessary to reach the proposed sub-base grades, construction of access roads, surface water drainage features, and sedimentation controls must also be outlined;

3.9.2.b.B. The changes in aquatic resources including the potential impacts to streams, wetlands, lakes, and drainage basin. This discussion must include discharge rates and volumes for groundwater control structures, leachate collection systems, and surface water runoff under existing conditions as well as that anticipated during active operation and following closure of the facility;

3.9.2.b.C. Building, treatment units, roads, and other structures to be constructed in conjunction with the facility. This discussion must include the size of the facilities and the number of miles of road to be constructed;

3.9.2.b.D. Emissions and discharges such as dust, diesel exhaust, odors, gases, leachate, surface water runoff, and collected groundwater associated with facility preparation, construction, operation, closure, and following closure of the facility;

3.9.2.b.E. Other changes anticipated with facility development ; and

3.9.2.b.F. Maps, plans, and other descriptive material to clarify the discussion such as a county map showing the general area of the project, a USGS topographic map, a plat map, zoning map, county wetlands map, and a facility development plan.

3.9.2.c. Existing Environment. The application shall include a brief description of the existing environment that may be affected by the project, with particular attention given to the following:

3.9.2.c.A. The physical environment including the regional and local topography, geology, surface water drainage features, hydrogeologic conditions, air, wetlands, and earth borrow sources as well as an evaluation of the groundwater quality data and overall performance of any existing solid waste facility;

3.9.2.c.B. The dominant aquatic and terrestrial plant and animal species and habitats found in the area including any threatened or endangered species and the amount, type, and hydraulic value of wetlands;

3.9.2.c.C. Land use information including dominant features and zoning in the area;

3.9.2.c.D. Social and economic conditions including any ethnic or cultural groups; and

3.9.2.c.E. Other special resources such as archaeological, historical, state natural areas, and prime agricultural lands.

3.9.2.d. Environmental Consequences. The application shall include a brief discussion of the probable adverse and beneficial impacts of the project, including primary, indirect, and secondary impacts, with particular attention given to the following:

3.9.2.d.A. The physical impacts which would be associated with facility design, construction, and operation, including visual impacts if applicable;

3.9.2.d.B. The biological impacts including destruction and creation of habitat, alteration of the physical environment and any impacts to endangered or threatened species;

3.9.2.d.C. The impacts on land use;

3.9.2.d.D. The social and economic impacts to local residents, cultural groups, and the communities and industries served by the facility;

3.9.2.d.E. Other special resources such as archaeological, historical, state natural areas, and prime agricultural lands; and

3.9.2.d.F. Probable adverse impacts that cannot be avoided including groundwater and surface water impacts,

modifications of topography and any borrow source limitations on development around the facility, any loss of agricultural or forest land, displacement of wildlife, and adverse aesthetic impacts for people in and around the facility.

3.10. Proposed Landfill Design.

3.10.1. Report Preparation. The application shall include a report describing the proposed landfill design. At a minimum, this report shall include the following:

3.10.1.a. Preliminary materials balance calculations, including sources for berms, liner, final cover system, drainage blanket, topsoil, daily and intermediate cover, and any other fill needed to construct the facility;

3.10.1.b. Proposed methods for leachate and gas control including collection, containment, and treatment. The capability of the wastewater treatment plants to accept leachate must be discussed and an identification made of the wastewater treatment plants the applicant is negotiating with to accept the leachate, if the plant is not directly controlled by the applicant;

3.10.1.c. Proposed operating procedures including the method of facility development, filling sequence, access control for each phase, surface water control, screening, covering frequency, as applicable, exclusion of hazardous wastes and other special design features;

3.10.1.d. A description of the proposed groundwater, leachate, surface water, gas, air, unsaturated zone, and other monitoring programs to be implemented to meet the requirements of Section 4.11 of these regulations;

3.10.1.e. Proposed closure plan and final use as specified in Section 6.1 of these regulations;

3.10.1.f. For Class C Commercial Industrial Solid Waste Facilities, the proposed method of demonstrating financial responsibility for closure and long-term care requirements including preliminary itemized cost estimates for land acquisition, facility preparation, construction of each major phase, daily operation, closure, and long-term care. An estimated cost per ton for disposal must also be included;

3.10.1.g. Proposed design for access roads;

3.10.1.h. Proposed design for drainage and sediment control; and

3.10.1.i. Proposed revegetation plan including seed mixture, seed bed preparation, fertilizers, mulching, and

maintenance schedule.

3.10.2. Preliminary Engineering Plans. The preliminary engineering design must be presented on twenty-four inch by thirty-six inch (24" x 36") plan sheets (unless an alternative size is approved by the chief in writing) as follows:

3.10.2.a. Proposed access, lateral extent of filling, phases of facility development, sub-base and base grades, slopes and the leachate collection system. The existing conditions map shall be used as a base map for this plan sheet;

3.10.2.b. A plan sheet showing present topography, proposed base and sub-base grades, final grades, and liner and final cover system configuration displayed on all geologic cross-sections intersecting the landfill;

3.10.2.c. A monitoring plan sheet showing the proposed groundwater, leachate, surface water, gas, air unsaturated zone, and any other monitoring programs;

3.10.2.d. A drainage plan sheet showing:

3.10.2.d.A. The directional flow of water on and away from the land to be affected;

3.10.2.d.B. The location of all erosion and sedimentation control structures;

3.10.2.d.C. The component drainage area together with a table showing total acreage and disturbed acreage within each component; and

3.10.2.d.D. A sediment structure table showing type of sediment control structure, total contributing drainage area (acres), disturbed acreage controlled by total disturbance in drainage area (acres), and storage capacity (acre-feet);

3.10.2.e. A detailed plan sheet showing proposed closure sequence and final grades; and

3.10.2.f. A plan sheet showing the details of proposed design features for the major engineering structures at the facility;

3.10.3. Sequencing of Solid Waste Disposal.

3.10.3.a. Solid Waste Placement Schedule. The sequence of solid waste disposal in landfills shall be specified in a schedule of solid waste placement which shall be approved by the chief. The solid waste placement schedule shall correspond to a horizontal control grid system, with grid elements having maximum

dimensions of two hundred (200) feet square. The horizontal control grid system shall be referenced to a permanent physical marker or object on the site, with vertical control referenced to an elevation established for the marker. The solid waste placement schedule shall specify the order in which grid elements (maximum two hundred (200) square feet in size) will be used for solid waste disposal for each lift of every solid waste fill area.

3.10.3.b. Solid Waste Disposal Coordination. The schedule of solid waste placement shall be coordinated with the construction of on-site access roads, surface water drainage system, leachate collection system and other facility construction in solid waste fill areas.

3.11. Landfill Liners.

3.11.1. The application shall contain plans, drawings, and cross-sections, and specifications for a liner system to demonstrate compliance with performance standards including the following:

3.11.1.a. The design of the liner system;

3.11.1.b. The thickness and characteristics of the subbase;

3.11.1.c. The thickness and characteristics of the leachate detection zone;

3.11.1.d. The design for the leachate monitoring system in the leachate detection zone;

3.11.1.e. The nature and thickness of the liner material;

3.11.1.f. The thickness and characteristics of the leachate collection zone;

3.11.1.g. The design for the leachate collection system in the collection zone;

3.11.1.h. The thickness and characteristics of the protective cover; and

3.11.1.i. A plan for installing the liner system.

3.11.2. The application shall include a quality assurance and quality control plan for the construction and installation of the liner system. At a minimum, the Q.A./Q.C. plan shall include:

3.11.2.a. A description of the testing procedures and construction methods proposed to be implemented during construction of the liner system;

3.11.2.b. A description of the manner in which the protective cover and liner system will be maintained and protected in unfilled portions of the disposal area prior to and during placement of the initial lift of solid waste; and

3.11.2.c. A description of the manner in which the protective cover and liner system will be protected from weather prior to and during placement of the initial lift of solid waste.

3.11.3. The application shall demonstrate that leachate will not adversely affect the physical or chemical characteristics of the proposed liner system, or inhibit the liner's ability to restrict the flow of solid waste, solid waste constituents or leachate, based on the most recent edition of EPA Method 9090, Compatibility Test for Wastes and Membrane Liners, or other documented data.

3.12. Identification and Characterization of Potential Borrow Sources for Landfills.

3.12.1. General. The application shall contain a description of each proposed borrow source for liner and capping purposes including the volume of acceptable material, total acreage, ownership, location, present land use, transportation routes and any access restrictions, travel distance from the proposed waste disposal facility, surface water drainage patterns, and significant hydrologic features such as surface waters, springs, drainage divides, and wetlands.

3.12.2. Field and Laboratory Investigations. At a minimum, preliminary field and laboratory investigations to define the physical characteristics of the proposed borrow material must include the information specified in Section 3.8.2 of these regulations unless an alternative geotechnical investigation program is approved by the chief in writing. Applicants may submit an alternative program in cases where previous information exists regarding the proposed source.

3.12.3. Data Presentation. The following information must be submitted with the application:

3.12.3.a. The calculated volume of acceptable material based on the information obtained from the test pits or borings;

3.12.3.b. Property boundaries and test pit/boring locations shown on a USGS topographic map with a scale of one inch equal to five hundred feet (1 inch = 500 feet). The mapped area must extend a minimum of five hundred (500) feet beyond the proposed borrow source;

3.12.3.c. An isopach map showing the thickness of acceptable material;

3.12.3.d. A description of the methods to be used for separating the acceptable material from any unacceptable material;

3.12.3.e. A proposal for maintaining drainage, sedimentation control, and proper abandonment of the property; and

3.12.3.f. All data obtained from the testing program.

Note: It may be necessary to obtain federal, State, or local permits prior to excavating materials from a borrow source near surface waters or wetlands. It is the responsibility of the applicant or property owner to obtain any such permits.

3.13. Bonding and Financial Assurance for Class G Commercial Industrial Solid Waste Facilities.

3.13.1. Requirements for Class G, Commercial Industrial Solid Waste Facilities.

3.13.1.a. The chief will not approve a new, reissued, renewed, or modified permit for a Class G Commercial Industrial Solid Waste Facility unless the applicant first submits to the director a bond in accordance with these regulations and the bond is approved by the director.

3.13.1.b. The bond must be submitted after the application is approved but before the permit is issued.

3.13.1.c. A person who holds a valid Division permit to conduct a Class G Commercial Industrial Solid Waste activity on the effective date of these regulations must file a bond with the director prior to receiving the permit modification required under Section 3.5.4 of these regulations.

3.13.2. General Bonding and Financial Assurance Requirements.

3.13.2.a. All bonds must be submitted under the requirements of these regulations on a form prepared and furnished by the director, must be made payable to the State of West Virginia, and must provide for continuous liability from the initiation of operations at the facility for the full term of the permit and for up to thirty (30) years after final closure of the permit site. Any further time period necessary to achieve compliance with the requirements in the closure plan of the permit shall be considered an additional liability period.

3.13.2.b. If a permit applicant elects to offer a certificate or securities as a bond, then the cash deposit or market value of such securities or certificates must be equal to or greater than the sum of the bond.

3.13.2.c. Bonds shall be conditioned on compliance with the Solid Waste Management Act, the regulations promulgated thereunder, orders issued by the chief or the director, and the terms and conditions of the permit.

3.13.2.d. Bonds will be reviewed for legality and form in accordance with established Division procedures.

3.13.2.e. Bonds will be placed with the State treasurer to be held in the name of the State in trust for the purpose for which the deposit is made when the permit is issued.

3.13.2.f. With the director's permission, the permittee may remove the deposit if it is replaced with an equivalent or greater deposit.

3.13.2.g. If for any reason a permittee fails to maintain proper bonding, the director shall issue a cease and desist order and revoke the permit and the permittee shall become fully liable for the amount of the bond.

3.13.3. Form of Bond or Other Financial Assurance.

3.13.3.a. The director will accept the following types of bonds:

3.13.3.a.A. A surety bond;

3.13.3.a.B. A collateral bond of which the following forms will be allowed:

3.13.3.a.B.(a) Cash deposit;

3.13.3.a.B.(b) Collateral securities; and

3.13.3.a.B.(c) Certificates:

3.13.3.a.B.(c)(A) Bonds of the United States or its possessions;

3.13.3.a.B.(c)(B) Bonds of the Federal Land Bank;

3.13.3.a.B.(c)(C) Bonds of the Homeowners Loan Corporation;

3.13.3.a.B.(c)(D) Full Faith and General Obligation bonds of the State of West Virginia or other states and of any West Virginia county, district, or municipality, or of other states;

3.13.3.a.B.(c)(E) Certificates of deposit in a

bank in this State in favor of the Division; and

3.13.3.a.B.(c)(F) Whole life insurance policies.

3.13.3.a.C. An escrow account;

3.13.3.a.D. Letters of credit;

3.13.3.a.E. Performance bonding fund participation (as established by the director); and

3.13.3.a.F. A combination of these methods.

3.13.4. Special Terms and Conditions for Surety Bonds.

3.13.4.a. The director will not accept the bond of a surety company that has failed or unduly delayed, as determined by the director, in making payment on a forfeited surety bond.

3.13.4.b. The director will accept only the bond of a surety authorized to do business in this State when the surety bond is signed by an appropriate official of the surety as determined by the director. If the principle place of business of the surety is outside of this State, the surety bond must also be signed by an authorized resident agent of the surety.

3.13.4.c. The bond must provide that full payment will be made under the bond within thirty (30) days of receipt of the Division's declaration of forfeiture by the surety.

3.13.4.d. The director will not accept surety bonds from a surety company when the total bond liability to the Division on bonds filed by the permittee, the principal and related parties exceeds the surety company's single risk limit.

3.13.4.e. The bond shall provide that the surety and the principal are jointly and severally liable for payment of the bond amount.

3.13.4.f. The director will provide in the bond that the amount shall be confessed to judgment and execution upon forfeiture.

3.13.4.g. The Division will retain, during the term of the bond, and upon forfeiture of the bond, a property interest in the surety's guarantee of payment under the bond which may not be affected by the bankruptcy, insolvency, or other financial incapacity of the permittee or principal on the bond.

3.13.4.h. The bond shall provide that the surety will give written notice to the principal and the Division within ten (10) days of a notice received or an action failed by or with a

regulatory agency having jurisdiction over the surety alleging one of the following:

3.13.4.h.A. The insolvency or bankruptcy of the surety.

3.13.4.h.B. Violations of regulatory requirements applicable to the surety, when as a result of the violations, suspension or revocation of the surety's license to do business in this State or another state is under consideration by the regulatory agency.

3.13.5. General Terms and Conditions for Collateral Bonds.

3.13.5.a. The applicant may submit a collateral bond in one or more of the following forms:

3.13.5.a.A. Cash.

3.13.5.a.B. Certified checks, cashier's checks, or treasurer's checks which are issued, drawn on or certified by a bank or banking institution authorized to do business in this State.

3.13.5.a.C. Automatically renewable and assignable certificates of deposit from banks or banking institutions authorized to do business in this State.

3.13.5.a.D. Automatically renewable, irrevocable standby letters of credit from banks or banking institutions authorized to do business in this State.

3.13.5.a.E. Negotiable bonds of the United States Government; the Federal Land Bank; the Homeowners Loan Corporation; and Full Faith and General Obligation bonds of the State of West Virginia or other states, and of any West Virginia county, district, or municipality, or of other states.

3.13.5.a.F. Whole life assignable insurance policies from companies licensed to conduct business in this state.

3.13.5.b. The market value of the collateral deposited must be at least equal to or greater than the sum of the required bond amount.

3.13.5.c. The director will place collateral submitted under these regulations with the State treasurer, who is responsible for its custody and safe keeping until released or collected and deposited in an appropriate fund designated by the director.

3.13.5.d. Collateral must be in the name of the

permittee, and pledged and assigned to the State free and clear of claims or rights. The pledge or assignment shall vest in the State a property interest in the collateral which shall remain until released under the terms of these regulations, and may not be affected by the bankruptcy, insolvency, or other financial incapacity of the permittee.

3.13.5.e. The State will ensure that its ownership rights to collateral deposited are established to make the collateral readily available to the State upon forfeiture. The director may require proof of ownership, and other means such as secondary agreements, as he deems necessary to meet the requirements of these regulations. If the director determines that collateral deposited does not meet the requirements of these regulations, he may take action under the law to protect the State's interest in the collateral.

3.13.6. Collateral Bonds; Escrow.

3.13.6.a. The director may authorize the permittee to establish an escrow account deposited in one or more federally-insured accounts payable on demand only to the director, or directly deposited with the director.

3.13.6.b. Escrow funds deposited in federally-insured accounts shall not exceed the maximum insured amount under applicable federal insurance programs such as the Federal Deposit Insurance Corporation (F.D.I.C.) or the Federal Savings and Loan Insurance Corporation (F.S.L.I.C.).

3.13.6.c. Interest paid on an escrow account shall be retained in the escrow account and applied to the bond value of the escrow account unless the director has approved that the interest be paid to the permittee. In order to qualify for interest payment, the permittee shall request such action in writing during the permit application process.

3.13.7. Collateral Bonds; Letters of Credit.

3.13.7.a. Bank letters of credit submitted as collateral for collateral bonds are subject to the following conditions:

3.13.7.a.A. The letter of credit must be a standby or guarantee letter of credit issued by a federally-insured or equivalently protected bank or banking institution authorized to do business in this State. The letter of credit may not be issued without a credit analysis substantially equivalent to a credit analysis applicable to a potential borrower in an ordinary loan situation. A letter of credit so issued must be supported by the customer's unqualified obligation to reimburse the issuer for monies paid under the letter of credit.

3.13.7.a.B. The letter of credit must be irrevocable and must be so designated.

3.13.7.a.C. The director may not accept letters of credit issued for a customer when the amounts of the letter of credit, aggregated with other loans and credits extended to the customer, exceeds the issuer's legal lending limit for that customer as defined in the United States Banking Code (12 U.S.C. §§21-220).

3.13.7.a.D. Letters of credit must name the West Virginia Division of Environmental Protection beneficiary and shall be payable to the Division upon demand, in part or in full, upon presentation of the Division's drafts, at sight. The Division's right to draw upon the letter of credit does not require documentary or other proof by the Division that the customer has violated the conditions of the bond, the permit, or another requirement.

3.13.7.a.E. The director will not accept letters of credit from a bank which has failed or delayed in making payment on a letter of credit previously submitted as collateral to the Division.

3.13.7.b. The director will not accept letters of credit from a bank for any person, on all permits held by that person, in excess of three (3) times the company's maximum single obligation as provided by State law.

3.13.7.c. The director will provide in the indemnity agreement that the amount shall be confessed to judgement upon forfeiture.

3.13.7.d. The letter of credit must provide that:

3.13.7.d.A. The bank will give prompt notice to the permittee and the director of any notice received or action filed alleging the insolvency or bankruptcy of the bank, or alleging any violations of regulatory requirements which could result in suspension or revocation of the bank's charter or license to do business.

3.13.7.d.B. In the event the bank becomes unable to fulfill its obligations under the letter of credit for any reason, notice shall be given immediately to the permittee and the director.

3.13.7.d.C. Upon the incapacity of a bank by reason of bankruptcy, insolvency, or suspension or revocation of its charter or license, the permittee must be deemed to be without bond coverage. The director shall issue an order against any operator who is without bond coverage. The notice will specify the period

within which bond coverage must be replaced. If the permittee cannot replace the bond within the specified period of time, then the director shall immediately revoke the permit. The permittee shall be fully liable for the amount of the bond coverage.

3.13.7.e. The issuing bank must waive the rights of setoff or liens which it has or might have against the letter of credit.

3.13.7.f. If the director collects an amount under the letter of credit due to failure of the permittee to replace the letter of credit after demand by the director, the Division will hold the proceeds as cash collateral.

3.13.8. Collateral Bonds; Certificates of Deposit.

3.13.8.a. Certificates of deposit submitted as collateral for collateral bonds are subject to the following conditions:

3.13.8.a.A. The certifications of deposit must be made payable to the permittee and shall be assigned to the Division by the permittee, in writing, as required by the director and on forms provided by the director. The assignments must be recorded upon the books of the bank issuing the certificate.

3.13.8.a.B. The certificate of deposit must be issued by a federally-insured or equivalently protected bank or banking institution which is authorized to do business in this state.

3.13.8.a.C. The director will not accept certificates of deposit from a bank or banking institution when the accumulated total of certificates of deposit issued by the bank or banking institution for the operator is in excess of one hundred thousand dollars (\$100,000), or the maximum insurable amount as determined by the F.D.I.C. or the F.S.L.I.C., if the banking institution is insured by the F.D.I.C. or F.S.L.I.C. If it is insured by an equivalent method administered by the State, similar limits apply.

3.13.8.a.D. The certificate of deposit must state that the bank issuing it waives the rights or setoff or liens which it has or might have against the certificate.

3.13.8.a.E. The certificate of deposit must be automatically renewable and fully assignable to the State. Certificates of deposit must state on the face that they are automatically renewable.

3.13.8.a.F. The permittee must submit certificates of deposit in amounts which will allow the Division to liquidate the certificates prior to maturity, upon forfeiture, for the full amount of the bond determined in accordance with and required by these regulations, without penalty to the Division.

3.13.8.a.G. The director will not accept certificates of deposit from banks which have failed or unduly delayed in making payment on certificates of deposit which have previously been submitted as collateral to the Division.

3.13.8.a.H. The permittee is not entitled to interest accruing after forfeiture is declared by the Division, unless and until the forfeiture declaration is ruled invalid by a court having jurisdiction over the Division, and the ruling is final.

3.13.9. Collateral Bonds; Negotiable Bonds.

3.13.9.a. Negotiable bonds submitted and pledged as collateral for collateral bonds are subject to the following conditions:

3.13.9.a.A. The director may determine the current market value of governmental securities for the purpose of establishing the value of the securities for bond deposit.

3.13.9.a.B. The current market value shall be at least equal to the amount of the required bond.

3.13.9.a.C. The Division may periodically revalue the securities and may require additional amounts if the current market value is insufficient to satisfy the bond amount requirements for the facility.

3.13.9.a.D. The permittee may request and receive the interest accruing on governmental securities with the Division as the same becomes due and payable. No interest will be paid for post-forfeiture interest accruing during appeals and after resolution of the appeals, when the forfeiture is adjudicated, decided, or settled in favor of the state.

3.13.9.a.E. The estimated bond value of all collateral posted as bond assurance will be subject to a margin bond value to market value ratio as determined by the director. This margin will reflect legal and liquidation fees, as well as value depreciation, marketability and fluctuations which might affect the net cash available to the director in performing closure or other remedial measures. The bond value of collateral may be evaluated at any time, but must be evaluated as part of permit renewal. In no case may the bond value exceed the market value.

3.13.10. Surety/Collateral Combination Bonds.

3.13.10.a. The director may accept a bond which is comprised of surety and collateral bond instruments otherwise allowed by these regulations. The instruments must be construed as part of the entire bond for the facility. The director may refuse to accept the bond if he determines that the financial guarantee of

the bond is unacceptable, or for another reason does not meet the purposes of the Act, these regulations, or orders of the chief or the director.

3.13.11. Collateral Bonds; Whole Life Insurance Policies.

3.13.11.a. Whole life insurance policies submitted as collateral bond are subject to the following conditions;

3.13.11.a.A. The person submitting a whole life insurance policy as collateral bond shall be the owner of the policy submitted.

3.13.11.a.B. The director shall require that whole life insurance policies be assigned to the Division in writing and that this assignment be entered upon the books of the company issuing such policies and be recorded by the permittee as required by the director.

3.13.11.a.C. The director shall accept only those policies issued by companies licensed to conduct business in the State of West Virginia. Furthermore, such companies shall be member insurers of the West Virginia Life and Health Insurance Guaranty Association and have an independent financial rating by A. M. Best Company of AT Superior and Aaa by Moody's Investor Service.

3.13.11.a.D. The director, shall at a minimum, value this collateral at net cash surrender value so as to ensure that such policies less all administrative expenses and penalties incurred at the time of redemption shall equal or exceed the amount of the bond required to be in place.

3.13.11.a.E. The director shall accept only whole life insurance policies which are not interest sensitive but rather those which carry a guaranteed rate of interest.

3.13.11.a.F. At the time of assignment, no policy shall have liens, loans or encumbrances and none shall become effective without the prior written acceptance of the director. An exception to the above shall be granted in the case of policies allowing future dividends distributed to such policies to offset annual premiums, so long as the net cash surrender value is equal to or exceeds the amount of bond required to be in place.

3.13.12. Replacement of Existing Bond.

3.13.12.a. The director may allow a permittee to replace an existing surety or collateral bond with another surety or collateral bond, if the liability which has accrued against the bond, the permittee and the facility is transferred to the replacement bond. The replacement bond must include an endorsement by the permittee acknowledging the retroactivity of the liability

to the date of issue of the original solid waste permit or a prior date determined by the director. The bond amount for this replacement bond will be determined under these regulations, but may not be less than the amount on deposit with the Division.

3.13.12.b. The Division will not release existing bonds until the permittee has submitted and the director has approved acceptable replacement bonds. A replacement of bonds under Section 3.13.12 of these regulations does not constitute a release of bond under these regulations.

3.13.13. Bond Amounts.

3.13.13.a. In accordance with the provisions of W. Va. Code §20-5F-5b, all permits shall be bonded for at least ten thousand dollars (\$10,000).

3.13.13.b. Bond amounts for landfills which meet or exceed the liner requirements of these regulations shall be set at one thousand to four thousand dollars (\$1,000 to \$4,000) per acre at the discretion of the director.

3.13.13.c. Bond amounts for single liner landfills currently approved by the director shall be six thousand dollars (\$6,000) per acre.

3.13.13.d. Bond amounts for landfills that do not have liners shall be eight thousand dollars (\$8,000) per acre.

3.13.13.e. Bond amounts for solid waste facilities other than landfills that exceed the requirements of these regulations shall be set at one thousand to four thousand dollars (\$1,000 to \$4,000) per acre at the discretion of the director.

3.13.13.f. Bond amounts for solid waste facilities other than landfills that meet the requirements of these regulations shall be set at four thousand to eight thousand dollars (\$4,000 to \$8,000) per acre at the discretion of the director.

3.14. Background Investigation Disclosure Statement.

3.14.1. Every applicant shall file a background investigation disclosure statement with the director at the time the solid waste facility permit application is filed, unless exempt from such disclosure under the provisions of Section 3.14.4 of these regulations.

Note: For the purposes of Section 3.14 of these regulations, the term "permit applicant" shall mean that person or persons to whom a solid waste facility permit, upon approval of the applications for that facility, is to be issued.

3.14.1.a. Solid waste facility permit applications shall include those applications for a Class G industrial solid waste facility and any major modifications to an approved Class G industrial solid waste facility.

3.14.1.b. The background investigation disclosure statement shall be filed on a form prescribed by the director.

3.14.2. Background investigation disclosure statements shall be filed by submitting an original and one (1) certified copy of all papers to the director, accompanied by a nonrefundable background investigation fee in accordance with the schedule of fees in Appendix A of these regulations.

3.14.2.a. Additional certified copies of background investigation disclosure statements, or any portions thereof, shall be supplied upon the request of the director.

3.14.2.b. Within sixty (60) days of receipt of a background investigation disclosure statement from a permit applicant, the director shall advise the permit applicant if the background investigation disclosure statement is incomplete on its face, and shall specify what additional information is required.

3.14.3. Any individual required to file a background investigation disclosure statement shall be fingerprinted for identification and investigation purposes in accordance with procedures established by the director. Two sets of fingerprints shall be provided by each applicant on forms designated by the West Virginia State Police and the Federal Bureau of Investigation.

3.14.3.a. Completed fingerprint cards shall be supplied by the permit applicant with the filed background investigation disclosure statement. The permit applicant shall arrange for the taking of fingerprints.

3.14.3.b. Fingerprints must be taken and verified at the Section of Waste Management's central office or other location designated by the chief.

3.14.4. Exemptions. The following persons are exempted from the requirement to submit a background investigation disclosure statement:

3.14.4.a. Any department, division, agency, commission or authority of the federal government or any state government, or any county, municipality, or agency thereof.

3.14.4.b. Any person whose application or permit is solely for a Class F industrial solid waste facility.

3.14.5. Contents of Background Investigation Disclosure

Statement. The background investigation disclosure statement shall be filed on forms supplied by the director.

3.14.5.a. Every permit applicant, officer, director, or manager of the permit applicant; shareholder owning five percent (5%) or more of capital stock; beneficial or otherwise of the permit applicant; general or limited partners of the permit applicant; any person performing a function similar to a director of the permit applicant; United States parent corporations of the permit applicant including ultimate parent corporations; an agent of the permit applicant; or associates of the permit applicant shall file separate background investigation disclosure statements.

3.14.5.a.A. Appropriate affidavit or addendum, as specified by the director, shall be filed with the background investigation disclosure statement by all individuals who are defined as permit applicants and not previously required to be listed pursuant to Section 3.14.5.a of these regulations.

3.14.5.b. All questions contained in the background investigation disclosure statement shall be addressed by accurate and complete answers by each applicant.

3.14.5.c. Any other information the director may require that relates to the competency, reliability, or good character of the applicant.

3.14.6. The background investigation disclosure statement shall be notarized.

3.14.7. Background investigation disclosure statements shall be signed by each of the following:

3.14.7.a. If of a corporation, by its president, its chairman of the board, any other chief executive officer thereof, its secretary and its treasurer.

3.14.7.b. If of a partnership, by each of its partners; if of a limited partnership, only by each of its general partners.

3.14.7.c. If of any other business concern, by its chief executive officer, its secretary, and its treasurer.

3.14.7.d. If of an individual, by the person himself.

3.14.8. All signatures shall be signed in ink and dated on original papers.

3.14.9. Change of Information on Background Investigation Disclosure Statement. Where a permit applicant has an application pending before the director and any of the information required to be included in any background investigation disclosure statement

changes, or any additional information should be added after the filing of the statement, the permit applicant or permittee shall provide that information to the director in writing within thirty (30) days of the change or addition.

3.14.10. All permittees shall report to the director within thirty (30) days any changes or additions in the following information required to be included in the background investigation disclosure statement, unless exempt from such disclosure under the provisions of Section 3.14.4 of these regulations:

3.14.10.a. The name of the permittee;

3.14.10.b. The names or identities of the permit applicant, officer, director, or manager of the permit applicant; shareholder owning five percent (5%) or more of capital stock, beneficial or otherwise of the permit applicant; general or limited partners of the permit applicant; any person performing a function similar to a director of the permit applicant; United States parent corporations of the permit applicant including ultimate parent corporations; an agent of the permit applicant; or associates of the permit applicant.

3.14.10.c. The full name and business address of any company which collects, transports, treats, stores, disposes, or processes solid or hazardous waste in which the permit applicant currently owns or operates or owned or operated in the past ten (10) years.

3.14.11. All permittees shall file a complete and accurate background investigation disclosure statement to the director within thirty (30) days for any additions to the names or identities of any officer, director, or manager of the permit applicant; shareholder owning five percent (5%) or more of capital stock, beneficial or otherwise of the permit applicant; general or limited partners of the permit applicant; any person performing a function similar to an overseer of the permit applicant; United States parent corporations of the permit applicant including ultimate parent corporations; an agent of the permit applicant; or associates of the permit applicant.

3.14.11.a. All new background investigation disclosure statements filed shall comply with Section 3.14 of these regulations.

3.14.12. Annual Updates. All permittees, except industrial solid waste closure permittees, shall file annually from the date of issuance of the permit, any changes or additions to the information contained in the background investigation disclosure statement which was not filed pursuant to Section 3.14.10 of these regulations.

3.14.12.a. The annual updates shall be filed on a form prescribed by the director.

3.14.12.b. The annual updates shall be filed, by submitting to the director, an original and one (1) certified copy of all papers.

3.14.12.c. The annual updates shall include a recapitulation of any changes previously reported pursuant to Section 3.14.12 of these regulations.

3.14.12.d. The annual updates shall be notarized, signed and dated in ink.

3.14.13. Where permit applicant or permittee has submitted multiple annual updates, changes, or additions to its background investigation disclosure statement, or the information concerning a permit applicant or permittee has undergone substantial change, or if the background investigation disclosure statement currently on file with the director is more than five (5) years old, the director, in his discretion, may require the permit applicant or permittee to file a new background investigation disclosure statement, including all applicable application fees.

3.14.14. Additional Information; Duty to Cooperate. All permit applicants and permittees have the continuing duty to provide any assistance or information requested by the director and to cooperate in any inquiry, investigation, or hearing conducted by the director. If, upon issuance of formal request to answer any inquiry or produce information, evidence or testimony, any permit applicant or permittee refuses to comply, the permit of that permit applicant may be denied or revoked by the director.

3.14.15. Physical Evidence. Upon request, the permit applicant shall supply physical evidence, including, but not limited to, photographs or handwriting exemplars of any individual who filed a background investigation disclosure statement or any annual updates, changes, or additions thereof.

3.14.16. Disqualification Criterion. The director shall not approve a new, reissued, renewed, or modified permit for an industrial solid waste facility unless the applicant demonstrates compliance with the provisions of W. Va. Code §20-5F-4(c).

3.14.16.a. Compliance shall be determined after the applicant has undergone a complete background investigation for the industrial solid waste facility permit application and the background investigation disclosure statement.

3.14.17. Cause for Permit Revocation. In addition to any other cause set forth elsewhere in these regulations, any permit may be revoked for any violation of W. Va. Code §20-5F-4(c).

3.14.18. Severance of Disqualifying Individuals. Notwithstanding the disqualification of any permit applicant or permittee pursuant to these regulations, the director may issue or renew a permit if the permit applicant or permittee severs the interest of or affiliation with the person who would otherwise cause that disqualification.

3.14.18.a. Where the disqualifying individual is the owner of any interest or interest in the debt liability of the permittee or permit applicant, he must completely divest himself of that interest. Where immediate sale of the interest would work an economic hardship on the individual, the permittee or permit applicant, the director may, in his discretion, allow for divestiture over a period of time not to exceed one (1) year.

3.14.18.b. The disqualifying individual must provide all documents requested by the division to evaluate any request for any divestiture time frame exceeding fourteen (14) days from the date of disqualification notification by the division.

3.14.18.c. Before the director will issue or renew a permit to a permit applicant or permittee which has severed a disqualifying individual, the applicant or permittee must submit to the director an affidavit, sworn to by the chief executive officer, attesting to the severance of the disqualifying individual and describing the terms, circumstances, and conditions of that severance. Any instruments pertaining to that severance shall be submitted with the affidavit.

3.14.19. Confidential Information. Any information received pursuant to Section 3.14 of these regulations shall be kept confidential by the Division to the extent allowable by state law including W. Va. Code §29B-1-1.

3.14.20. Convicted Persons Generally. No permittee or permit applicant shall knowingly hire as an officer, director, or manager any person who has been convicted of any of the crimes enumerated in these regulations or in W. Va. Code §20-5F-4(c) without first submitting a background investigation disclosure statement to and obtaining approval of the director. No permittee or permit applicant shall knowingly allow any person who has been convicted of any of the crimes enumerated in these regulations or in W. Va. Code §20-5F-4(c) to acquire an interest or debt liability interest without first submitting a background investigation disclosure statement to and obtaining approval of the director.

3.14.20.a. In connection with any such request, the permittee or permit applicant shall file with the director an amended background investigation disclosure statement, containing the necessary information about the person, including any evidence the permittee or permit applicant wishes to bring forth

demonstrating the person's rehabilitation.

3.14.20.b. The director shall consider whether the person has affirmatively demonstrated rehabilitation, and shall consider the factors set forth in determining whether to grant permission to the permittee or permit applicant to employ the individual or allow him to acquire an interest in the permit.

3.14.20.c. Any permittee or permit applicant that violates the provisions of Section 3.14 of these regulations may be subject to having its permit revoked, notwithstanding the rehabilitation of the individual in question.

3.14.21. Environmental Compliance History. The director may refuse to grant any permit if he has reasonable cause to believe, as indicated by documented evidence, that the permit applicant has exhibited a pattern of violating the environmental statutes or regulations of this State, any other state, or the federal government.

3.14.22. Mitigation and Restitution. In the case of persons convicted of violating the criminal provisions of any federal or state environmental statute or regulations, or persons convicted of any crime which involved the violation of such statutes or regulations, the director will not consider such person rehabilitated unless he has made all reasonable efforts to clean up or mitigate any environmental damage caused by the activities for which he was convicted, and to make restitution to any victims injured thereby.

3.15. Water Pollution Control Requirements.

3.15.1. For the purposes of leachate collection and treatment for wastewater and associated facility discharges, the wastewater facility and all appurtenances must meet the permit information requirements for such treatment as set out in W. Va. Code §§20-5, 20-5A, and 20-5F and all regulations promulgated thereunder. For the purposes of Section 3.15 of these regulations only, the requirements in 46 CSR 2 are hereby incorporated by reference. For landfills a single permit document will be issued pursuant to Section 3.5.2 of these regulations.

3.16. Specific Application and Permitting Requirements.

3.16.1. Requirements for Landfills. The applicant must submit all information required under Section 3 of these regulations in order to constitute a completed application, unless modified by the chief.

3.16.2. Requirements for Industrial Solid Waste Incinerators.

3.16.2.a. General Requirements. The applicant must submit the following information to the chief in order to obtain a permit for an industrial solid waste incinerator facility:

3.16.2.a.A. All information required under Sections 3.7.1. through 3.7.12, 3.7.13.a, 3.7.16, 3.8.9, 3.9, 3.10.1.h, 3.10.1.i, and 3.15 of these regulations. The information required under Sections 3.13 and 3.14 is required for Class G facilities.

3.16.2.a.B. Detailed drawings of waste storage areas and clean-up areas showing drainage schemes;

3.16.2.a.C. Recordkeeping procedures;

3.16.2.a.D. A waste management plan describing the handling and storage of the incoming waste and the disposition of the ash and other streams, alternate disposal options, screening procedures and handling options for screened waste, and clean-up procedures;

3.16.2.a.E. Dust control procedures;

3.16.2.a.F. A waste characterization plan;

3.16.2.a.G. A contingency plan indicating fire-fighting equipment, communication procedures with community agencies, and arrangements for emergency assistance; and

3.16.2.a.H. A start-up schedule.

3.16.2.b. Required Permits. At a minimum, two (2) permits will be required for incinerator facilities:

3.16.2.b.A. A permit from the West Virginia Air Pollution Control Commission; and

3.16.2.b.B. A Permit By Rule for solid waste storage areas and support facilities from the West Virginia Division of Environmental Protection. This Permit By Rule does not relieve the applicant of the necessity of obtaining other appropriate, required permits. An incinerator facility shall be deemed to have a permit from the division for such storage areas and support facilities only if in compliance with the requirements of Sections 3.16.2 through 3.16.2.b.B.(h):

3.16.2.b.B.(a) The facility is in compliance with the location standards as provided for in section 3.2 of these regulations.

3.16.2.b.B.(b) All solid waste being stored while waiting incineration, or being held for resource recovery, shall be placed in waste compatible containers that do not leak. Waste

suitable for stockpiling must be arranged neatly so as to avoid mixing types of waste and to minimize the potential for contaminated run-off from such stored waste.

3.16.2.b.B.(c) Storage areas must be bermed to collect any run-off or spills. Areas where liquids will be stored must be floored and bermed with material such as concrete, compacted clay, or other material approved by the chief that will impede contamination of the soil or groundwater as a result of spills or other mishandling.

3.16.2.b.B.(d) Soluble solid waste must be stored in a manner so as to provide protection from the weather or other liquid infiltration.

3.16.2.b.B.(e) Putrescible wastes shall not be stored longer than two days before disposal and vector control must be practiced at all times in areas for such waste.

3.16.2.b.B.(f) All leachate run-off, and run-on from such storage areas must be collected and diverted to a wastewater treatment facility or to a collection tank for subsequent treatment and discharge or disposal.

3.16.2.b.B.(g) Plans for construction of such storage facilities, specifications, drawings and a description of handling practices to be utilized must be filed with the chief and approved in writing prior to the initiation of any such construction or handling. Any physical alterations to such facilities, or changes in handling practices must be approved in advance by the chief and are required to be reported by the operator to the chief in writing.

3.16.2.b.B.(h) Incompatible wastes must not be stored together or in proximity where such practice would create a fire, explosion, or reaction potential. The operator shall develop and maintain on-site a contingency plan relating to emergency procedures, equipment and implementation protocol.

3.16.2.c. Exemptions.

3.16.2.c.A. Except for those facilities handling special wastes as provided in Section 4.14 of these regulations, incinerators having a design capacity of five hundred (500) pounds per hour or less are exempt from the permitting requirements of Section 3.16.2. of these regulations. However, such an incinerator must be designed and operated to meet the performance standards of Section 5 of these regulations and with all appropriate regulations of the West Virginia Air Pollution Control Commission.

3.16.2.c.B. Incinerators burning only clean wood waste are exempt from all permitting requirements of Section 3.16 of

these regulations. However, such incinerators must be designed and operated to meet the performance standards of Section 5 of these regulations and with all appropriate regulations of the West Virginia Air Pollution Control Commission.

3.16.2.c.C. Incinerators regulated under the Hazardous Waste Regulations of the Division of Environmental Protection and the Air Pollution Control Commission and that comply with the provisions of Section 3.16.2.b.B. of these regulations are exempt from any further permitting requirements under these regulations. Such facilities may burn both hazardous and solid waste.

3.16.2.d. Existing Incinerators. Any solid waste incinerator in existence on May 1, 1990, must apply to the division for the permit by rule required under Section 3.16.2.b.B. of these regulations by no later than October 1, 1992. By that date, the operator of the solid waste incinerator must also submit documentation to the division of the existence of a permit, pending permit application, or other authorization for the incinerator from the West Virginia Air Pollution Control Commission.

3.16.3. Requirements for Class F and G Industrial Solid Waste Transfer Stations.

3.16.3.a. General Requirements. The applicant must submit the following information to the chief, where applicable, in order to obtain a permit for an industrial solid waste transfer station:

3.16.3.a.A. All information required under Sections 3.7.1 through 3.7.12, 3.7.16, 3.8.1, 3.8.9, 3.9, and 3.15 of these regulations. The information required under Sections 3.13 and 3.14 is required for Class G facilities.

3.16.3.a.B. A description of the solid waste storage or loading areas;

3.16.3.a.C. A description of the areas of land for which a bond will be posted;

3.16.3.a.D. The location and use of buildings and related facilities which will be used in the operation; and

3.16.3.a.E. For Class G facilities, the location of scales and weigh stations to be used in the operation.

3.16.3.b. Operations Plan. An application to conduct transfer station activities shall include an operations plan that contains the following:

3.16.3.b.A. A narrative description of the general operating plan for the proposed facility including:

3.16.3.b.A.(a) The origin, composition, and weight or volume of solid waste that is proposed to be received at the facility;

3.16.3.b.A.(b) The proposed operating hours for the facility;

3.16.3.b.A.(c) The process to be used at the facility;

3.16.3.b.a.(d) The daily operational methodology of the proposed process;

3.16.3.b.a.(e) The loading rate;

3.16.3.b.a.(f) The proposed capacity of the facility; and

3.16.3.b.A.(g) The expected life of the facility.

3.16.3.b.B. A plan for an alternative waste handling or disposal system during periods when the proposed facility is not in operation, including procedures to be followed in case of equipment breakdown (e.g., the use of standby equipment, extension of operating hours, and contractual agreements for diversion of municipal waste to other facilities); and

3.16.3.b.C. A plan for hiring and training equipment operators and other personnel in the design and operation of the facility.

3.16.3.c. Plan for Access Roads. An application to conduct transfer station activities shall contain, where applicable, designs, cross-sections, and specifications for access roads, including load limits, in accordance with Section 4.5.3 of these regulations.

3.16.3.d. Stormwater, Soil Erosion, and Sedimentation Control Plan. An application to conduct transfer station activities shall include a plan to manage surface water and control erosion during the phases of construction and operation on the permit area. Calculations indicating water quantities shall be based on the 25-year, 24-hour rainfall event. The plan shall include fully dimensioned diversion ditches and indicate length, gradient, and cross-section for configuration by reach and capacities for ditch volume by reach. Calculations which are necessary to support design and siting shall be included in the plan.

3.16.3.e. Groundwater Monitoring Plan. If required by the chief, the applicant shall submit a groundwater monitoring plan to detect contamination, degradation or pollution of groundwater

from the facility.

3.16.3.f. Soil Monitoring Plan. If required by the chief, the applicant shall submit a soil monitoring plan, capable of detecting soil contamination from the facility.

3.16.3.g. Nuisance Control Plan. An application to conduct transfer station activities shall contain a plan to prevent hazards or nuisances from vectors, odors, noise, dust, and other nuisances not otherwise provided for in the permit application. The plan shall provide for the routine assessment of vector infestation and shall also provide for counter measures. The plan may include a control program involving a contractual arrangement for services with an exterminator.

3.16.3.h. Litter Control Plan. An application to conduct transfer station activities shall contain a plan to control litter and prevent unauthorized dumping within the transfer station boundaries.

3.16.3.i. Contingency Plan. An application to conduct transfer station activities shall contain a contingency plan relating to emergency procedures, hazard prevention, emergency equipment, and the implementation of the contingency plan.

3.16.3.j. A transfer station will not be required to have a separate permit if the facility is already covered by terms and conditions addressing the transfer station in an existing §20-5A and/or 5F permit, or in any new permit issued pursuant to these rules.

3.16.4. Resource Recovery Permitting Requirements.

3.16.4.a. Permit By Rule. A Resource Recovery facility shall be deemed to have a permit by rule from the West Virginia Division of Environmental Protection for solid waste materials storage areas and associated support facilities only if in compliance with the requirements of Section 3.16.4 of this regulation. This Permit By Rule does not relieve the applicant from the necessity of obtaining other appropriate, required permits.

3.16.4.b. General Requirements. The applicant must submit the following information, where applicable, to the chief in order to obtain a permit for a resource recovery facility:

3.16.4.b.A. All information required under Sections 3.7.1 through 3.7.12, 3.7.13.a, 3.7.16, 3.8.1, 3.8.9, 3.9, 3.10.1.h, 3.10.1.i, and 3.15 of these regulations. The information required under Sections 3.13 and 3.14 is required for Class G facilities;

3.16.4.b.B. Detailed drawings of storage areas for solid waste materials that are to be recovered and clean-up areas showing drainage schemes;

3.16.4.b.C. Recordkeeping procedures;

3.16.4.b.D. A solid waste materials management plan describing the handling and storage of the incoming materials to be recovered and the disposition of any ash and other waste streams, alternate disposal options, screening procedures and handling options for screened waste, and clean-up procedures;

3.16.4.b.E. Dust control procedures;

3.16.4.b.F. An incoming solid waste materials characterization plan;

3.16.4.b.G. A contingency plan indicating fire-fighting equipment, communication procedures with community agencies, and arrangements for emergency assistance; and

3.16.4.b.H. A start-up schedule.

3.16.4.c. The facility is in compliance with the location standards as provided for in section 3.2 of these regulations. Facilities in existence on the effective date of these regulations may continue in operation, but may not spatially expand the facility into any areas which would not meet the location standards of section 3.2 of these regulations unless waived by the chief.

3.16.4.d. All solid waste materials stored while being held for resource recovery, shall be placed in waste compatible containers that do not leak. Waste suitable for stockpiling must be arranged neatly so as to avoid mixing types of waste and to minimize the potential for contaminated run-off from such stored waste.

3.16.4.e. Solid waste materials storage areas must be bermed to collect any run-off or spills. Areas where liquids will be stored must be floored and bermed with material such as concrete, compacted clay, or other material approved by the chief that will impede contamination of the soil, surface water or groundwater as a result of spills or other mishandling.

3.16.4.f. Soluble solid waste must be stored in a manner so as to provide protection from the weather or other liquid infiltration.

3.16.4.g. Putrescible wastes shall not be stored longer than two days before disposal, and vector control must be practiced at all times in areas where such waste is stored.

3.16.4.h. All leachate run-off, and run-on from such storage areas must be collected and diverted to a wastewater treatment facility or to a collection tank for subsequent treatment and discharge or disposal.

3.16.4.i. Plans for construction of such storage facilities, specifications, drawings and a description of handling practices to be utilized must be filed with the chief and approved in writing prior to the initiation of any such construction or handling. Any physical alterations to such facilities, or changes in handling practices must be approved in advance by the chief and are required to be reported by the operator to the chief in writing.

3.16.4.j. Incompatible wastes must not be stored together or in proximity where such practice would create a fire, explosion, or reaction potential. The operator shall develop and maintain on-site a contingency plan relating to emergency procedures, equipment and implementation protocol.

3.16.4.k. Existing Resource Recovery Facilities. Any Resource Recovery Facility in existence on July 1, 1992, must apply to the division for the permit by rule required under Section 3.16.4 of these regulations by no later than October 1, 1992.

3.17. Draft Permit.

3.17.1. Once an application is complete, the chief shall tentatively decide whether to prepare a draft permit or to deny the application.

3.17.2. If the chief decides to prepare a draft permit, a draft permit shall be prepared that contains the following information:

3.17.2.a. All conditions under Section 3 of these regulations;

3.17.2.b. All compliance schedules; and

3.17.2.c. Standards for treatment, storage, and disposal and other permit conditions under Section 4 or 5 of these regulations.

3.17.3. A fact sheet shall be prepared by the chief for every draft permit for each solid waste facility or activity. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. The chief shall send this fact sheet to the applicant and, on request, to any other person.

3.17.4. The fact sheet shall include, when applicable:

3.17.4.a. A brief description of the type of facility or activity which is the subject of the draft permit.

3.17.4.b. The type and quantity of wastes which are proposed to be or are being recycled, treated, stored, or disposed of, injected, emitted, or discharged. A description of the type of wastes shall include, but not be limited to, the characteristics of the waste materials and the potential effects on public health and the environment.

3.17.4.c. A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions.

3.17.4.d. A rationale explaining why any requested variances or alternatives to required standards do or do not appear justified.

3.17.4.e. A description of the procedures for reaching a final decision on the draft permit including:

3.17.4.e.A. The beginning and ending dates of the comment period and the address where comments will be received;

3.17.4.e.B. The procedures for requesting a hearing and the nature of that hearing; and

3.17.4.e.C. Any other procedures by which the public may participate in the final decision.

3.17.4.f. The name and telephone number of a person to contact for additional information.

3.18. Permit Modification, Suspension, and Revocation.

3.18.1. Actions by the Chief.

3.18.1.a. Permits may be modified, revoked and reissued, suspended, or revoked by the chief. Permits may only be modified, revoked and reissued, suspended, or revoked for the reasons specified in Section 3.18 of these regulations.

3.18.1.a.A. When a permit is modified, only the conditions subject to modification are reopened. All other conditions of the permit will remain in effect for the duration of the permit.

3.18.1.a.B. The chief may require additional information and, in the case of a major modification, may require submission of a new permit application.

3.18.1.b. If the chief tentatively decides to modify a

permit, he will prepare a modified draft permit and will follow the public notice procedures in Section 3.21 of these regulations. The chief may request additional information or require the submission of an updated permit application from the applicant.

3.18.2. Causes for Modification or Permittee-Requested Reissuance of Permits.

3.18.2.a. Minor Modification. Permits may be modified by the chief at any time except for major modifications as listed in Section 3.18.2.b of these regulations. Minor modification does not require the preparation of a draft permit or the completion of the public notice procedures.

3.18.2.a.A. A minor modification may be approved by the chief for a permittee proposing to increase the volume of solid waste accepted at his facility by an amount of ten percent (10%) or less upon application in alternate years, unless such an increase requires a change in the classification of the facility.

3.18.2.b. Major Modifications. The following are causes for major modification, but not reissuance, of a permit unless the permittee so requests or agrees. These causes require the preparation of a draft permit and public notice and the opportunity for a public hearing as required by these regulations unless an emergency is declared by the director.

3.18.2.b.A. The capacity of the waste disposal unit will be increased over the permitted capacity except as provided in Section 3.18.2.a.A. of these regulations;

3.18.2.b.B. The performance, efficiency, or longevity of the liner system will be decreased;

3.18.2.b.C. The efficiency or performance of the leachate management system will be affected;

3.18.2.b.D. A new gas treatment system will be installed or the efficiency or performance of an existing gas management system will be decreased;

3.18.2.b.E. The performance or operation of the surface water control system will be significantly affected;

3.18.2.b.F. A decrease in the quality or quantity of data from any environmental monitoring system will occur;

3.18.2.b.G. A change in the design or configuration of the regraded area will occur;

3.18.2.b.H. The amount or type of post-closure financial assurance will change;

3.18.2.b.I. The facility boundary will be significantly changed;

3.18.2.b.J. The post-closure land use of the property will change;

3.18.2.b.K. A remedial action to protect groundwater is necessary;

3.18.2.b.L. The permit is to be transferred to a new operator;

3.18.2.b.M. Operating authorization is being sought to place into service a structure constructed pursuant to a construction Q.A./Q.C. program; or

3.18.2.b.N. Other similar modifications as determined by the chief.

3.18.3. Permit Suspension or Revocation.

3.18.3.a. Suspension. A solid waste facility permit may be suspended by order of the chief or the director for any of the following reasons:

3.18.3.a.A. Violation of the Act, these regulations or any order of the chief or the director issued thereunder;

3.18.3.a.B. Interference with a representative of the chief or the director in the performance of his duties;

3.18.3.a.C. Failure to adhere to the terms and conditions of the permit or any order issued by the chief or the director under the Act or these regulations; or

3.18.3.a.D. Discovery of failure in the application or during the permit issuance process to fully disclose all significant facts or the permittee's misrepresentation of any significant fact at any time.

3.18.3.b. Revocation. A solid waste facility permit may be revoked by order of the chief or the director for any of the following reasons:

3.18.3.b.A. Any deficiency at the solid waste facility constituting an imminent pollution, health, or safety hazard;

3.18.3.b.B. Persistent violation of these regulations, permit terms and conditions, or orders issued by the chief or the director under the Act or these regulations;

3.18.3.b.C. Discovery of failure in the application or

during the permit issuance process to fully disclose all significant facts or the permittee's misrepresentation of any significant fact at any time; or

3.18.3.b.D. Any cause which would require disqualification pursuant to these regulations from receiving a permit upon original application.

3.18.3.c. Effect of Permit Suspension or Revocation.

3.18.3.c.A. Suspension. All solid waste processing, recycling, or disposal activities and the receipt of any solid waste at the solid waste facility shall cease immediately upon receipt of an order of suspension. Activities at the facility may recommence only after expiration of the order of suspension or upon revocation of that order by the issuing authority.

3.18.3.c.B. Revocation. All solid waste processing, recycling, or disposal activities and the receipt of any solid waste at the solid waste facility shall cease immediately upon receipt of an order of revocation. The solid waste facility owner shall submit either an application for a permit to close the facility or an application for new solid waste facility permit within the time specified in the order of revocation.

3.18.3.c.C. Environmental Monitoring and Control. Environmental monitoring and control activities specified in an order of suspension or in an order of revocation shall continue at the solid waste facility for the duration of such order or until the authority who issued that order approves the cessation of such activities.

3.19. Transfer of Permit.

3.19.1. A permit issued by the chief in accordance with the provisions of these regulations may be transferred to another person. The person seeking to succeed to the rights granted by the permit shall:

3.19.1.a. File a completed application with the chief on forms and in a manner prescribed by the director, including background investigation disclosure statements as required by Section 3.14 of these regulations;

3.19.1.b. Provide performance bond coverage, where applicable, at least equal to that of the original permit in accordance with Section 3.13 of these regulations. It shall be affirmatively demonstrated to the director that a bond in the full amount of that required for the permit will be kept in full force and effect before, during, and after the transfer of the permit rights;

3.19.1.c. Provide for public notice in accordance with Section 3.21 of these regulations; and

3.19.1.d. Obtain the chief's approval for the transfer of the permit in writing.

3.19.2. The chief may refuse to transfer any permit and require that a new application for a solid waste facility permit be submitted prior to any transfer of permit responsibility or rights. Such refusal shall be made in writing giving reasons therefor.

3.19.3. A permittee who wishes to assign the operation and control of the solid waste facility through an agreement, contract, or other legal instrument, to another party but retain the permit must request prior written approval on forms prescribed by the director. Such party to which the operation would be assigned, if the operation involves a Class G Commercial Industrial Solid Waste Facility, shall complete background investigation disclosure statements as required under Section 3.14 of these regulations.

3.20. Permit Renewal.

3.20.1. Application for Permit Renewal. An application for the renewal of a valid permit shall be submitted a minimum of one hundred eighty (180) days prior to the expiration of the current permit on forms prescribed by the director and shall contain the following:

3.20.1.a. The name and address of the permittee, location of the permit area including the county, and the permit number;

3.20.1.b. A statement that the terms and conditions of the permit are being satisfactorily met;

3.20.1.c. A statement that the operation is in compliance with the applicable environmental protection standards of the Act and all applicable rules and regulations;

3.20.1.d. A statement that the performance bond or other financial assurance, if applicable, for the operation will continue in effect.

3.20.1.e. A progress map of the same size and scale as the proposal map;

3.20.1.f. A certification that the information set forth in the form and progress map is true and accurate; and

3.20.1.g. A notarized signature of the principal officer of the permittee in accordance with Section 3.7.18 of these regulations.

3.20.2. Public Notice. An applicant seeking to renew a valid permit shall meet the public notice requirements of Section 3.21 of these regulations. The Division will receive comments only upon the contents of the application for renewal. A public hearing may be held at the discretion of the chief.

3.20.3. Modification and Renewal. If an application is received which proposes a major modification to the existing permit and the renewal of that permit, it shall be treated as a major modification pursuant to Section 3.18.2.b of these regulations in addition to the requirements of Section 3.20 of these regulations.

3.21. Public Notice.

3.21.1. Scope.

3.21.1.a. Public notice shall be given whenever either of the following actions have occurred:

3.21.1.a.A. A draft permit has been prepared; or

3.21.1.a.B. A hearing has been scheduled under Section 3.23 of these regulations.

3.21.2. Timing.

3.21.2.a. Public notice of the preparation of a draft permit shall allow at least thirty (30) days for public comment. Upon request of the permittee, the public comment period will be extended for an additional thirty (30) days. Further extension of the comment period may be granted by the chief for good cause shown but in no case may the further extension exceed an additional thirty (30) days.

3.21.2.b. Public notice of a public hearing shall be given at least thirty (30) days before the hearing. Public notice of the hearing may be given at the same time as public notice of the draft permit and the two (2) notices may be combined.

3.21.2.c. A notice required under Section 3.21 of these regulations may be combined with that notice required under W. Va. Code §20-5A.

3.21.3. Methods. Public notice may be given by the following methods:

3.21.3.a. By mailing a copy of a notice to those persons whose names are included on a mailing list maintained by the Division.

3.21.3.b. By the chief publishing the public notice as a Class II legal advertisement in a qualified newspaper, as defined

in W.Va. Code §59-3-1, serving the county where the facility will be located. This requirement is mandatory. The chief may also require that legal advertisement be placed in newspapers of designated adjacent counties. The cost of the publication will be borne by the applicant who must send a certification of publication to the Division within twenty (20) days after publication.

3.21.3.c. Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.

3.21.4. Contents.

3.21.4.a. All public notices issued under Section 3.21 of these regulations shall contain the following information:

3.21.4.a.A. The name and address of the office processing the permit action for which notice is being given;

3.21.4.a.B. The name and address of the permittee or permit applicant, and if different, of the facility or activity regulated by the permit, except in the case of general permits;

3.21.4.a.C. A brief description of the business conducted at the facility or activity described in the permit application or in the draft permit, when there is no application;

3.21.4.a.D. The name, address, and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit and the application;

3.21.4.a.E. A brief description of the comment procedures required by Section 3.21.2 of these regulations and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision;

3.21.4.a.F. A general description of the location of proposed permit area including streams;

3.21.4.a.G. A clear and accurate location map. A map of a scale and detail found in the West Virginia General Highway Map will be the minimum standard for acceptance. The map size must be at a minimum two inches by two inches (2" x 2"). Longitude and latitude lines and a north arrow must be indicated on the map and such lines will cross at or near the center of the proposed permit area; and

3.21.4.a.H. A description of the activities covered in

the application, including the type of solid waste facility, the types, amounts, and origins of solid wastes to be handled, site improvements, and solid waste handling methods.

3.21.4.b. In addition to the contents required under Section 3.21.4.a of these regulations, public notices for hearings shall contain the following information:

3.21.4.b.A. A reference to the date of previous public notices relating to the permit;

3.21.4.b.B. The date, time, and place of the hearing;
and

3.21.4.b.C. A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

3.22. Public Comments and Requests for Public Hearings.

3.22.1. During the public comment period provided under Section 3.21.2 of these regulations, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered in a response by the chief issued at the time of the permit issuance or denial.

3.23. Public Hearings.

3.23.1. The chief shall hold a public hearing in the vicinity of the proposed facility whenever he finds, on the basis of requests, a significant degree of public interest on issues relevant to the draft permit. The chief also may hold a public hearing at his discretion whenever such a hearing might clarify one or more issues involved in a permit decision.

3.23.2. Any person may submit comments and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing shall automatically be extended to ten (10) days after the close of any public hearings under Section 3.23 of these regulations.

3.23.3. A tape recording or written transcript of any public hearing shall be made available to the public, upon request.

3.24. Reopening of the Public Comment Period.

3.24.1. If any data, information, or arguments submitted

during the public comment period raise substantial new questions concerning a permit, or if as a result of comments submitted by someone other than the permittee, or the chief determines to revise any condition of the permit that had been sent to initial public notice, the chief shall take one or more of the following actions:

3.24.1.a. Prepare a new draft permit.

3.24.1.b. Reopen or extend the public comment period to give interested persons an opportunity to comment on the information or arguments submitted.

3.24.1.c. Conduct a public hearing.

3.24.2. Comments filed during the reopened comment period shall be limited to the substantial new questions that caused its reopening. The public notice shall define the scope of the reopening.

3.25. Public Participation File. The applicant for a permit for a solid waste facility, major modification, or closure shall maintain a file containing all written comments or inquiries received by the permittee during the public comment period concerning the permit. Copies of all such documents, and any written responses to such documents received or returned during the public comment period shall be forwarded to the chief within five (5) days of the end of the public comment period designated in the public notice. The Chief may request a further response from the applicant with regard to any written comment which has not been adequately addressed or responded to prior to permit issuance.

3.26. Public Availability of Information. Public availability of information relating to facility permits shall be governed by the provisions of W. Va. Code §29B.

3.27. Issuance and Effective Date of Permit.

3.27.1. After the close of the public comment period on a draft permit, the chief shall within sixty (60) days issue a final permit decision. The chief shall provide written notification of his decision to the applicant and to each person who has submitted written comments or requested notice of the final permit decision. For the purposes of Section 3.27 of these regulations, a "final permit decision" means the final decision of the chief to issue, deny, modify, revoke and reissue, or terminate a permit.

3.27.2. If the final permit decision is to deny, modify, or terminate a permit, the chief shall provide the reasons therefor in his written notification to the applicant. This notification shall also include reference to the procedures for appealing the final permit decision.

3.27.3. A final permit decision shall become effective not less than thirty (30) days after the date of notice of the decision, unless an earlier date is requested by the applicant and agreed upon by the chief.

3.28. Permit Review by the Director.

3.28.1. The director may refuse to grant a permit in accordance with the provisions of W. Va. Code §20-5F-4(c). Written notification of such a refusal, and the reasons therefore, shall be provided to the applicant.

3.28.2. Within thirty (30) days of his receipt of a permit application, compliance schedule, closure plan, or major modification application, the director shall determine whether such application, schedule, or plan is complete (i.e., in proper order for technical review to commence) and shall notify the applicant of his determination in writing. If the director determines that such application, schedule, or plan is not complete, the notification shall advise the applicant of the deficiencies that require remedy.

3.29. General Permits.

3.29.1. The chief may issue a general permit to facilities which treat only petroleum-contaminated soil to reduce such soil to de minimis levels of total petroleum hydrocarbons, by means of landfarming, aeration, bioremediation or any other non-thermal process. Operators of such facilities are not required to obtain an individual permit under this regulation so long as they comply with the terms of the general permit. This general permit does not relieve the operator or applicant of the necessity of obtaining other appropriate, required permits.

3.29.2. Any person wishing to operate under the general permit must meet following requirements:

3.29.2.a. The operator must give written notice to the Division prior to beginning soil treatment;

3.29.2.b. The operator must comply with all standards and requirements imposed by the State or Federal governments to preserve air and water quality;

3.29.2.c. Reduction of total petroleum hydrocarbons to de minimis levels may not be accomplished by addition of uncontaminated soil or other solids, other than as necessary to absorb free liquids;

3.29.2.d. Excavated soils - all excavated petroleum-contaminated soil must be placed on impervious material, such as concrete or polyethylene sheeting, with the sides banked so as to control and contain runoff. During periods when no treatment is

ongoing, the surface of the spoil must be covered with an impervious material;

3.29.2.e. Non-excavated soils - if petroleum-contaminated soil is to be remediated without excavation (e.g. in place bioremediation) the operator must prevent the spread of contamination to groundwater and surface water; and

3.29.2.f. The operator must establish that soil has been remediated to de minimis levels by means of samples which are taken in such a manner as to best characterize the extent of contamination of the soil, and sampling results must be provided to the chief.

3.29.3. General permits may be modified, suspended, or revoked for any person operating thereunder in accordance with the applicable requirements of Section 3 of this regulation.

3.29.4. Upon issuance of a general permit, an applicant wishing to operate pursuant to the permit's terms shall cause to be published a Class II legal advertisement in a qualified newspaper, as defined in W. Va. Code §59-3-1, serving the area where the permitted activity is to occur. The legal advertisement shall at a minimum provide the name of the permit holder, information as to how the permit holder can be contacted, permit number, a description of the location(s) of the permitted activity, a description of the permitted activity, and the name address and telephone number of the permitting agency. The advertisement shall be published prior to the start of the permitted activity and a copy of the advertisement must be provided to the chief within ten days of the date of publication.

3.30. Appeals. Appeal of permit decisions shall be conducted in accordance with the provisions of W. Va. Code §20-5F-7.

§47-38B-4. Landfill Performance Standards.

4.1. Enforcement of Landfill Performance Standards. Enforcement of the performance standards in Section 4 of these regulations shall be conducted in accordance with the provisions of W. Va. Code §20-5F.

4.2. Assessment Fees. Permittees of Class G Commercial Industrial Solid Waste Facilities are required under the provisions of W. Va. Code §20-5F-5a and 110 CSR 6A to collect and pay to the State solid waste assessment fees, unless exempt thereunder.

4.3. Operator Training and Certification. -(Reserved).

4.4. Operations Manual. Every facility must develop and maintain, on site, an operations manual. Facilities in existence prior to May 1, 1990 and which continue in operation shall have

developed such a manual by August 1, 1990 and all facilities shall make appropriate modifications to their operations manuals to comply with these regulations within ninety (90) days of the effective date of revisions to these regulations, unless granted a written extension of preparation time by the chief. New facilities must have a manual in place on the first day of business operations. The manual must include a table of contents which outlines, by section title and page number, the discussion required by these regulations.

4.4.1. General Information. The operations manual must identify the following items:

4.4.1.a. The facility title;

4.4.1.b. The engineering consultants;

4.4.1.c. The name and address of the facility owner and the name of the facility operator, the permit holder or permittee;

4.4.1.d. The location of the facility by latitude and longitude and county;

4.4.1.e. The proposed area of waste fill;

4.4.1.f. The anticipated life of the facility and its disposal capacity;

4.4.1.g. The waste contributors, including all industrial customers;

4.4.1.h. The waste type and quantity and origin to be disposed; and

4.4.1.i. Any exemptions requested from the Division.

4.4.2. Monitoring. The manual must include a description of required groundwater, surface water, gas, unsaturated zone, and leachate monitoring programs developed in accordance with the approved Q.A./Q.C. plan and the provisions of Section 4.4 of these regulations.

4.4.3. Operations. The manual must describe the daily operations of the facility including a discussion of the following items;

4.4.3.a. The timetable for the phases of facility development;

4.4.3.b. The waste types accepted or excluded;

4.4.3.c. Typical waste handling techniques, and methods

for handling unusual waste types;

4.4.3.d. Procedures for excluding the receipt of hazardous waste;

4.4.3.e. The hours of operation;

4.4.3.f. Traffic routing;

4.4.3.g. Drainage and erosion controls;

4.4.3.h. Windy, wet, and cold weather disposal operations;

4.4.3.i. Fire protection equipment;

4.4.3.j. Anticipated staffing requirements;

4.4.3.k. Methods for disease vector, dust, and odor control;

4.4.3.l. Daily clean-up;

4.4.3.m. Direction of filling;

4.4.3.n. Any resource recovery or recycling on the premises;

4.4.3.o. Record keeping and reporting requirements;

4.4.3.p. Parking for visitors, users, and employees;

4.4.3.q. A listing of the backup equipment available; and

4.4.3.r. A listing of local emergency response personnel.

4.4.4. Design. A general discussion of the design of the major engineering features, such as base grade configuration and relationships to subsurface conditions, anticipated waste types and characteristics, phases of development, traffic routing, liner design, facility monitoring, final capping, closure and long-term care and other similar design features.

4.4.5. Appendix. An appendix shall be included which lists the references used and includes any additional data not previously presented, supplemental design calculations, material specifications, operating agreements such as draft leachate treatment agreements or signed soil borrow agreements, documents related to long-term care funding, and other appropriate information.

4.5. Minimum Design Criteria for Landfills.

4.5.1. Design Capacity. The minimum design capacity for an industrial solid waste landfill must equal or exceed the expected volume of solid waste and daily and intermediate cover that will be disposed of at the facility within ten (10) years after operations begin. Expansions of existing facilities are not subject to the ten-year minimum design capacity requirement. This provision may be waived by the chief upon written request for a Class F industrial solid waste landfill.

4.5.2. Drainage and Sediment Control Plan.

4.5.2.a. Stream Channel Diversions.

4.5.2.a.A. Design Capacity.

4.5.2.a.A.(a) The design capacity of channels for temporary and permanent channel diversions shall be at least equal to the capacity of the unmodified stream channel immediately upstream and downstream of the diversion.

4.5.2.a.A.(b) The temporary and permanent channel diversions are to be designed so that the combination of channel, bank, and floodplain configuration is adequate to pass safely the peak runoff of a 10-year, 24-hour rainfall event for a temporary channel diversion and a 100-year, 24-hour rainfall event for a permanent channel diversion.

4.5.2.a.B. Removal of Temporary Diversions. Temporary channel diversions shall be removed when they are no longer needed to achieve the purpose for which they were approved as long as downstream facilities which were being protected are modified or removed.

4.5.2.a.C. Stream Channel Specifications. The drainage and sediment control plan shall contain the following plans, design data, and specifications concerning stream channels:

4.5.2.a.C.(a) A "stream channel design computation sheet" to be completed for each proposed temporary or permanent stream channel diversion;

4.5.2.a.C.(b) Construction plans showing:

4.5.2.a.C.(b)(A) A plan view of the area showing centerline profiles of existing stream channel and proposed location of the temporary or permanent stream channel (drawn to scale);

4.5.2.a.C.(b)(B) Profiles along the centerline of the existing and temporary or permanent stream channel showing original ground, proposed and existing stream bottom (drawn to scale);

4.5.2.a.C.(b)(C) A cross-section showing original ground limits, bottom width, side slopes, depth of flow, floodplain configuration; and

4.5.2.a.C.(b)(D) A detailed sequence of the installation of temporary or permanent stream channel diversions;

4.5.2.a.C.(c) Construction specifications; and

4.5.2.a.C.(d) Maintenance schedule and procedures for maintenance.

4.5.2.b. Diversions.

4.5.2.b.A. Run-On Control System. A landfill permittee must design, construct, operate, and maintain a run-on control system capable of preventing flow onto any part of the disposal area during peak discharge from at least a 25-year, 24-hour rainfall event.

4.5.2.b.B. Design Capacity. Diversions shall have the capacity to pass safely the peak discharge from the contributing watershed from a 25-year, 24-hour rainfall event.

4.5.2.b.C. Diversions Specifications. The drainage and sediment control plan shall contain the following plans, design data, and specifications concerning diversions:

4.5.2.b.C.(a) A "Diversion Design Computation Sheet" to be completed for each proposed diversions;

4.5.2.b.C.(b) Construction plans showing:

4.5.2.b.C.(b)(A) A surveyed profile along the centerline of the diversion showing original ground line and proposed diversion bottom;

4.5.2.b.C.(b)(B) A channel cross-section showing the original ground line, bottom width, side slopes, depth of flow, freeboard, and other pertinent information drawn to scale;

4.5.2.b.C.(b)(C) The type of soil in which the diversion will be excavated. Either the soil shall be sampled and classified at intervals of five hundred (500) feet or a demonstration of erosion potential based on existing soils information shall be made; and

4.5.2.b.C.(b)(D) The type and design of the outlet proposed for each diversion;

4.5.2.b.C.(c) Maintenance schedule and procedures

for maintenance; and

4.5.2.b.C.(d) Construction and vegetation specifications.

4.5.2.c. Sediment Control. Sediment control structures shall be constructed in appropriate locations in order to control sedimentation. All runoff from the disturbed area shall pass through a sedimentation pond or ponds (e.g., an earth embankment, excavated ponds, gabions, and cribs). All sediment control structures must be designed, constructed, and maintained in accordance with the contents of the U.S. Soil Conservation Service's "Erosion and Sediment Control Handbook for Developing Areas (West Virginia)" unless the chief approves the use of an equivalent handbook of guidance.

4.5.2.c.A. Design and Construction Requirements.

4.5.2.c.A.(a) All sediment control structures shall be constructed and certified prior to the commencement of any earth-moving or grading activities in upgradient areas which may contribute runoff to such control structures. Any change to the approved control structures made during construction shall be indicated on "as-built" plans showing the approved design, the changes made, and reference points. All "as-built" plans shall be submitted to the chief.

4.5.2.c.A.(b) All sediment control structures shall be located as near as possible to the disturbed area. All sediment control structures shall be located out of perennial streams unless otherwise approved by the director.

4.5.2.c.A.(c) All sediment control structures shall have the capacity to store 0.125 acre-feet of sediment for each acre of disturbed area in the structure's watershed.

4.5.2.c.A.(d) All discharges from sediment control structures shall not cause a violation of state and federal water quality standards and shall meet effluent limitations.

4.5.2.c.A.(e) All sediment control structures shall be designed, constructed, and maintained to prevent short-circuiting.

4.5.2.c.A.(f) All sediment control structures shall be cleaned out when the sediment accumulation reaches sixty percent (60%) of this design capacity. Clean-out elevation shall be indicated on plans submitted for the structure. Sediment removal and disposal shall be done in a manner that minimizes adverse effects on surface water and groundwater quality.

4.5.2.c.A.(g) All sediment control structures shall

be designed, constructed, and maintained to meet the following safety standards:

4.5.2.c.A.(g)(A) An adequate structural foundation must be provided for all structures through the clearing of trees and brush and the exclusion of organic material. Earth materials used in the construction shall be free of trees, roots, brush, frozen soil, organic materials, coal processing waste, construction waste, and other debris. All earth materials must be properly compacted to prevent excessive settlement.

4.5.2.c.A.(g)(B) Sediment control structures which normally impound water to an elevation of less than five (5) feet above the upstream toe of the structure and have a normal storage volume of less than twenty (20) acre-feet must provide a combination of principal and emergency spillways that will safely discharge a minimum 25-year, 24-hour rainfall event without overtopping of the structure. The principal spillway requirements may be waived by the chief if the emergency spillway is designed to safely by-pass the peak rate of discharge of a 25-year, 24-hour rainfall event in an open channel constructed of non-erodible material and capable of maintaining sustained flows. Where storage excavated below the natural stream level into natural ground comprises at least seventy percent (70%) of the total normal storage volume of the pond, the combination of principal and emergency spillways must safely discharge a minimum 10-year, 24-hour rainfall event without overtopping of the structure. All spillways must discharge an adequate distance beyond the downstream toe of the structure in a natural drainway to prevent erosion of the downstream toe.

4.5.2.c.A.(g)(C) A minimum difference in elevation of one and one-half (1.5) feet between the principal and emergency spillways must be provided. A minimum difference in elevation of one (1) foot between the maximum design flow elevation in the emergency spillway or exit channel and the top of the settled embankment must be provided.

4.5.2.c.A.(g)(D) Stabilization and revegetation of the embankment must be provided.

4.5.2.c.A.(h) Sediment control structures which impound water to an elevation of more than five (5) feet above the upstream toe of the structure and have a normal storage volume of twenty (20) acre-feet or impound water to an elevation of twenty (20) feet or more above the upstream toe of the structure shall be constructed, inspected, and closed in accordance with Section 6 of these regulations. In addition to the requirements of Section 6 of these regulations, the following minimum standards shall be adhered to:

4.5.2.c.A.(h)(A) An appropriate combination of

principal and emergency spillways shall be provided to discharge safely the runoff resulting from a 100-year, 6-hour rainfall event. All spillways must discharge an adequate distance beyond the downstream toe of the structure in a natural drainway to prevent erosion of the downstream toe.

4.5.2.c.A.(h)(B) The embankment shall be designed and constructed with a static safety factor of at least 1.5.

4.5.2.c.A.(h)(C) Appropriate barriers shall be provided to control seepage along the conduits that extend through the embankment.

4.5.2.c.A.(h)(D) All inspection reports and approvals shall be provided to the chief.

4.5.2.c.A.(i) Any sediment control structure that does or will impound or divert water and that is or will be twenty-five (25) feet or more in height from the natural bed of a stream or watercourse measured at the downstream toe of the barrier and which does or can impound fifteen (15) acre-feet or more of water or that is or will be six (6) feet or more in height from the natural bed of such stream or watercourse measured at the downstream toe of the barrier and which does or can impound fifty (50) acre-feet or more of water is, by definition, a "dam" subject to regulation under the provisions of W. Va. Code §20-5D.

4.5.2.c.A.(j) Discharge Structures. Discharge from temporary or permanent sediment control structures, diversions, or stream channel diversions shall be controlled by energy dissipators, riprap channels or other devices approved by the chief to reduce erosion, to prevent deepening or enlargement of stream channels, and to minimize disturbance of the hydrologic balance. Discharge structures shall be designed in accordance with standard engineering procedures.

4.5.2.c.B. Abandonment Procedures. Minimum requirements for abandoning sediment control structures prior to total release of bond are as follows:

4.5.2.c.B.(a) Excavated Sediment Pond (Dugout Type). There is no required abandonment procedure for excavated ponds unless they have an embankment. If they have an embankment, they shall follow the abandonment procedures outlined in Section 4.5.2.c.B.(b) of these regulations.

4.5.2.c.B.(b) Embankment-Type Sediment Dams; Embankment-Type Excavated Sediment Dams; Crib and Gabion Control Structures. Sediment dams and all accumulated sediment above the dam shall be removed from the natural drainway if they are built across it. Dams adjacent to natural drainways shall be abandoned

by diverting the entrance channel to the natural drainways, thus preventing any future surface runoff from entering the impoundment. When sediment dams are removed, the natural drainway shall be returned to its original profile and cross-section as near as practical. An original profile and cross-section view for the channel shall be submitted with the drainage plan. The channel sides and bottom shall be rock riprap. The riprap shall extend up to the top of the channel. The riprap requirement may be waived where the bottom and sides of the channel consist of bedrock. Provisions must be made to control sediments during dam removal and any necessary stream channel work.

4.5.2.c.B.(c) Revegetation of Disturbed Areas. All areas disturbed during abandonment of a sediment control structure shall be seeded and mulched immediately to stabilize the area.

4.5.3. - Access Roads.

4.5.3.a. Access Road Construction Plans. Construction plans for any non-publicly owned and maintained access road (i.e., a road used for facility access or for the haulage of solid waste to the facility) shall contain the following:

4.5.3.a.A. A plan view drawn to scale showing the station baseline, the location of each culvert with the drainage flow direction, the location of each intermittent or perennial streams with its flow direction, and other data pertinent to the construction of the access road.

4.5.3.a.B. A surveyed profile drawn to scale (the scale should be no greater than 1 inch = 100 feet horizontal and 1 inch = 50 feet vertical) showing the road surface, the location and size of culverts, station elevations, original ground, and percent grades.

4.5.3.a.C. A cross-section of the access road showing culverts and their slopes, fill material, original ground, ditches, and sediment control devices.

4.5.3.a.D. A structure computation sheet and a cross-section showing all data pertinent to the crossing of each intermittent or perennial stream.

4.5.3.a.E. Construction specifications -- covering excavation, selection and placement of materials, vegetative protection against erosion, road surfacing, drainage, and sediment control -- that incorporate the design criteria set forth in Section 4.5.3.b of these regulations.

4.5.3.a.E.(a) All grades referred to in Section 4.5.3.b of these regulations shall be subject to a tolerance of two percent (2%). All linear measurements referred to in Section

4.5.3.b of these regulations shall be measured from the horizontal and shall be subject to a tolerance of five percent (5%).

4.5.3.a.E.(b) All primary access roads for the facility, including those leading to the active area, must be designed for all-weather operation in accordance with standards promulgated by the West Virginia Division of Highways, unless all access to the facility is suspended during inclement weather days.

4.5.3.b. Access Road Construction.

4.5.3.b.A. Grades. The grading of an access road shall be such that:

4.5.3.b.A.(a) The overall grade shall not exceed ten percent (10%).

4.5.3.b.A.(b) The maximum pitch grade shall not exceed fifteen percent (15%) for three hundred (300) feet in each one thousand (1,000) feet of road construction. The intersection of the access road with an existing highway must be designed to provide sufficient sight distance and minimum interference with traffic on the highway.

4.5.3.b.A.(c) The surface shall pitch toward the ditchline at the minimum rate of one-half ($1/2$) inch per foot of surface width or crowned at the minimum rate of one-half ($1/2$) inch per foot of surface width as measured from the centerline of the access road.

4.5.3.b.B. Curves. The grade on switchback curves shall be reduced to less than the approach grade and should not be greater than ten percent (10%);

4.5.3.b.C. Cut Slopes. Cut slopes should not be steeper than 1:1 in soils or 1:4 in rock.

4.5.3.b.D. Drainage Ditches. A ditch shall be provided on both sides of a throughout and on the inside shoulder of a cutfill section, with ditch relief culverts being spaced according to grade. Water shall be intercepted or directed around and away from a switchback. All ditchlines shall be capable of passing the peak discharge of a 1-year, 24-hour rainfall event. Where super elevation to the inside of a curve will improve the safety of the access road, such as in the head of a hollow, a ditchline may be located on the outside shoulder of the cutfill section provided that the ditchline is designed so that it will remain stable and that drainage control in accordance with the Act is also provided for water on the outside of the curve.

4.5.3.b.E. Drainage Culverts. Ditch relief culverts shall be installed wherever necessary to insure proper drainage of

surface water beneath or through the access road.

4.5.3.b.E.(a) Culverts shall be installed in accordance with the following spacings:

4.5.3.b.E.(a)(A) For a road grade of zero to five percent (0% to 5%), the spacing shall be three hundred to eight hundred (300 to 800) feet;

4.5.3.b.E.(a)(B) For a road grade of six to ten percent (6% to 10%), the spacing shall be two hundred to three hundred (200 to 300) feet; and

4.5.3.b.E.(a)(C) For a road grade of eleven to fifteen percent (11% to 15%), the spacing shall be one hundred to two hundred (100 to 200) feet.

4.5.3.b.E.(b) Culverts shall cross the access road at a thirty (30) degree angle downgrade with a minimum grade of three percent (3%) from inlet to outlet, except in intermittent or perennial streams where the pipe shall be straight and coincide with the normal flow.

4.5.3.b.E.(c) The inlet end of each culvert shall be protected by a headwall of stable material as approved by the chief and the slope at the outlet end shall be protected with an apron of rock riprap, energy dissipator, or other material approved by the chief.

4.5.3.b.E.(d) Culverts shall be covered by compacted fill to a minimum depth of one (1) foot or one-half (1/2) of the culvert diameter, whichever is greater.

4.5.3.b.E.(e) Alternative culvert designs may be submitted to the chief for approval in cases where the design criteria in Section 4.5.3.b.E of these regulations is deemed to be impractical.

4.5.3.b.F. Culvert Openings. Culvert openings installed on an access road shall not be less than one hundred (100) square inches in area, but, in any event, all culvert openings shall be adequate to carry storm runoff of a peak discharge capacity of a 1-year, 24-hour rainfall event from the contributing watershed and shall receive necessary maintenance to function properly at all times.

4.5.3.b.G. Intermittent or Perennial Stream Crossing. Culverts, bridges, or other drainage structures shall be used to cross intermittent or perennial streams. Consideration shall be given to such factors as weather conditions, season of the year, and time period for construction with regard to using measures to minimize adverse effects to the water quality and stream channel.

In no event shall the sediment load of the stream be significantly increased or the water quality be significantly decreased during the construction period. Water control structures shall be designed with a discharge capacity capable of passing the runoff for a 10-year, 24-hour rainfall event from the contributing watershed. If approved by the chief, the capacity of the water control structure itself can be at least equal to or greater than stream channel discharge capacity immediately upstream and downstream of the crossing provided the structure can pass at least a 1-year, 24-hour rainfall event.

4.5.3.b.H. Sediment Control. A sediment storage volume must be provided equal to 0.125 acre-feet for each acre of disturbed area or a lesser value as approved by the chief. Temporary erosion and sedimentation control measures shall be implemented during construction until permanent control can be established.

4.5.3.b.I. Seeding of Slopes. All disturbed area including fill and cut slopes, shall be seeded and mulched immediately after the construction of an access road and maintained thereafter as necessary to control erosion.

4.5.3.b.J. Surfacing. An access road shall not be surfaced with any acid-producing or toxic material and the surface must be maintained in a manner that controls or prevents erosion and siltation.

4.5.3.c. Removal of Drainage Structures. Bridges, culverts, and stream crossings necessary to provide access to the facility shall not be removed until reclamation is completed and approved by the chief. The same precautions as to water quality are to be taken during removal of drainage structures as those taken during construction and use.

4.5.3.d. Existing Access Roads. Where existing roads are to be used for access or haulage, the requirements of Sections 4.5.3.b.A through 4.5.3.b.E of these regulations shall be waived by the chief if it can be demonstrated that reconstruction to meet the requirements of Section 4.5.3 of these regulations would result in greater environmental harm than is produced by existing conditions and that the drainage requirements in Section 4.5.3.b of these regulations can otherwise be met.

4.5.3.e. Infrequently Used Access Roads. Access roads constructed for and used only to provide infrequent service to facilities such as monitoring devices may be exempted by the chief from compliance with the requirements of Sections 4.5.3.b.A, 4.5.3.b.H, and 4.5.3.b.I of these regulations.

4.5.3.f. Dust Control. All reasonable means shall be employed to control dust from the surface of access roads.

4.5.3.g. Abandonment of Access Roads. Access roads shall be abandoned in accordance with the following:

4.5.3.g.A. Every effort shall be made when an access road is abandoned to prevent erosion by the use of culverts, water bars, or other devices. Water bars or earth berms shall be installed in accordance with the following spacings;

4.5.3.g.A.(a) For a grade of zero to five percent (0% to 5%), the spacing shall be three hundred to eight hundred (300 to 800) feet;

4.5.3.g.A.(b) For a grade of six to ten percent (6% to 10%), the spacing shall be two hundred to three hundred (200 to 300) feet; and

4.5.3.g.A.(c) For a grade of eleven to fifteen percent (11% to 15%), the spacing shall be one hundred to two hundred (100 to 200) feet.

4.5.3.g.B. The land covered by an access road shall be seeded and mulched immediately after the abandonment of the road in accordance with Section 4.5.6 of these regulations.

4.5.4. Liners.

4.5.4.a. Liner System Requirements. A person who receives a permit for a landfill after November 4, 1988 -- including a permit that results in an expansion of a currently-permitted landfill -- shall design, construct, operate, and maintain a liner system at that landfill. Nothing within these regulations shall be construed to allow the installation of any liner system on areas not lined as of November 30, 1989, that is not in conformance with section 4.5.4.a.E or 4.5.4.a.G of these regulations. Landfills that do have an article 5F permit and a liner installed as of November 30, 1989, may install a liner as approved by the chief. Areas where solid waste is or has been disposed of as of November 30, 1989 shall either be closed or retrofitted with a liner system for any active portions in accordance with the following:

4.5.4.a.A. A landfill for which a valid closure permit has been issued pursuant to W. Va. Code §20-5F-5 may remain in operation until November 30, 1991 -- at which time such landfill shall be closed in conformance with its permit and these regulations -- provided that, by November 30, 1990, such landfill has in place:

4.5.4.a.A.(a) Groundwater monitoring wells in conformance with the requirements of Section 3.8.4 of these regulations;

4.5.4.a.A.(b) A groundwater monitoring program in conformance with the requirements of Section 4.11 of these regulations;

4.5.4.a.A.(c) An effective leachate treatment capability; and

4.5.4.a.A.(d) Sediment runoff control.

4.5.4.a.B. A landfill that meets all of the requirements enumerated in Section 4.5.4.a.A of these regulations and that has in place a liner underlying the facility that has been proven to the chief to be of adequate construction may remain in operation until November 30, 1992, at which time such landfill shall be closed in conformance with its permit and these regulations.

4.5.4.a.C. A landfill that meets all of the requirements enumerated in Sections 4.5.4.a.A and 4.5.4.a.B of these regulations, but for which a valid permit to operate has been issued rather than a closure permit, may remain in operation in such condition until November 30, 1992, after which date solid waste shall be placed in such facility only over a liner system designed, constructed, operated, and maintained in conformance with these regulations.

4.5.4.a.D. After November 30, 1992, all landfilled solid waste shall be placed above a liner system designed, constructed, operated, and maintained in conformance with these regulations.

4.5.4.a.E. A liner system shall consist of the following elements:

4.5.4.a.E.(a) Subbase, which is the prepared layer of soil or earthen materials upon which the remainder of the liner system is constructed;

4.5.4.a.E.(b) Leachate detection zone, which consists of a perforated piping system within a layer of soil or earthen material placed on top of the subbase and upon which the composite liner is placed;

4.5.4.a.E.(c) Composite liner, which consists of two (2) components; the compacted clay component topped with the synthetic liner; and

4.5.4.a.E.(d) Leachate collection and protective cover zone which is a leachate collection system within a prepared layer of soil or earthen material placed over the composite liner.

4.5.4.a.F. Active portions of existing landfills

which have installed liners, leachate collection systems, and groundwater monitoring programs, as of May 1, 1990, and which are in compliance with the former solid waste guidelines of the Division may petition the director to allow use of an alternate liner system, if:

4.5.4.a.F.(a) A demonstration is made to the director that an alternate design will provide the same degree of protection of the groundwater resources as the liner system described in Section 4.5.4.a.E of these regulations. The demonstration must include a series of groundwater monitoring well sampling analyses as well as direction-of-migration and rate-of-flow studies showing that there are no existing or potential groundwater pollution problems; and

4.5.4.a.F.(b) For Class G Commercial Industrial Solid Waste Facilities a bond is posted in the amount of eight thousand dollars (\$8,000) for each acre of the facility where the alternate liner is to be used.

4.5.4.a.G. In order to allow for the development of new technology, applicants may petition the director to allow installation of an alternate liner system upon a demonstration to the director that the alternate system will be equally or more protective of the groundwater resources than the liner described in Section 4.5.4.a.E of these regulations.

4.5.4.b. Liner System Limitations.

4.5.4.b.A. No person may construct a liner system for a facility unless there is at least four (4) feet maintained between the bottom of the subbase of the liner system and the seasonal high groundwater table.

4.5.4.b.A.(a) Soil mottling shall indicate the presence of a seasonal high groundwater table.

4.5.4.b.A.(b) Drainage systems may be utilized to maintain a four (4) foot isolation distance between the bottom of the subbase of the liner system and the seasonal high groundwater table. The drainage system shall be limited to drain tile, piping, and french drains.

4.5.4.b.B. No person may construct a liner system for a facility unless at least eight (8) feet can be maintained between the bottom of the subbase of the liner system and the permanent groundwater table.

4.5.4.b.C. A minimum of four (4) feet vertical separation shall be maintained between the bottom of the subbase of the liner system and bedrock unless otherwise approved by the chief. If backfilled material is used, the nature of these

materials is subject to approval by the chief.

4.5.4.b.D. If the approved design plans provide for the placement of additional adjacent liner, waste may not be placed within fifteen (15) feet of an edge of the liner that will be joined by additional adjacent liner. The edge shall be protected by soil cover or another method approved in the permit until additional liner is added.

4.5.4.b.E. If the approved design plans do not provide for the placement of additional adjacent liner, waste may not be placed within five (5) feet of an edge of the liner.

4.5.4.b.F. A liner berm at least four (4) feet high shall be constructed and maintained along the edge of the liner to prevent the lateral escape of leachate.

4.5.4.b.G. The edge of the liner shall be clearly marked.

4.5.4.b.H. The operator shall comply with additional requirements the chief deems necessary to protect public health, safety, and the environment.

4.5.4.c. Liner System Subbase.

4.5.4.c.A. The subbase portion of a liner system shall:

4.5.4.c.A.(a) Be at least six (6) inches thick and compacted to a Standard Proctor density of at least ninety-five percent (95%) at three to five percent (3% to 5%) wet of optimum;

4.5.4.c.A.(b) Have a minimum bearing capacity of two and one-quarter tons per square foot plus one-half of the total applied load in pounds per square foot:

4.5.4.c.A.(c) Be no more permeable than 1×10^{-6} cm/sec based on laboratory and field testing;

4.5.4.c.A.(d) Be hard, uniform, smooth, and free of debris, rock, plant materials, and other foreign material; and

4.5.4.c.A.(e) Have a slope of at least two percent (2%).

4.5.4.c.A.(f) The subgrade construction certification and a Q.A./Q.C. report shall be submitted to the chief prior to the placement of any material over the subgrade.

4.5.4.d. Liner System Leachate Detection Zone.

4.5.4.d.A. The leachate detection zone shall:

4.5.4.d.A.(a) Create a flow zone between the subbase and the composite liner more permeable than 1×10^{-3} cm/sec based on laboratory and field testing. The leachate detection zone including piping system must be designed and placed on a minimum slope of two percent (2%);

4.5.4.d.A.(b) Be at least twelve (12) inches thick;

4.5.4.d.A.(c) Be comprised of clean soil or earthen materials that contain no debris, plant material, or material with sharp edges;

4.5.4.d.A.(d) Have geotextile material placed within the leachate detection zone in such a manner as to prevent clogging of the piping system. The geotextile material must not be placed directly against pipes; and

4.5.4.d.A.(e) Contain a perforated piping system capable of detecting and intercepting liquid within the leachate detection zone and conveying the liquid to central collection points.

4.5.4.d.A.(e)(A) The slope, size, and spacing of the piping system shall assure that liquids drain efficiently from the leachate detection zone;

4.5.4.d.A.(e)(B) The distance between pipes in the piping system may not exceed one hundred (100) feet on center;

4.5.4.d.A.(e)(C) The pipes shall be installed perpendicular to the slope with continuous positive slope;

4.5.4.d.A.(e)(D) The minimum diameter of the perforated pipe shall be four (4) inches with a wall thickness of Schedule 40 or greater;

4.5.4.d.A.(e)(E) The pipe shall be capable of supporting anticipated loads without failure based on facility design;

4.5.4.d.A.(e)(F) Rounded stones or aggregates shall be placed around the pipes of the piping system. The stones or aggregates shall be sized to prevent clogging of the pipes and damage to subgrade and composite liner;

4.5.4.d.A.(e)(G) The piping system shall be installed in a fashion that facilitates cleanout, maintenance, and monitoring. Manholes or cleanout risers shall be located along the perimeter of the leachate collection piping system. The number and

spacing of the manholes or cleanout risers shall be sufficient to insure proper maintenance of the piping system by water jet flushing or an equivalent method;

4.5.4.d.A.(e)(H) The leachate detection system shall be cleaned and maintained as necessary; and

4.5.4.d.A.(e)(I) The leachate detection zone construction certification and a Q.A./Q.C. report shall be submitted to the chief prior to the placement of the composite liner.

4.5.4.e. Liner System Composite Liner.

4.5.4.e.A. The compacted clay component shall:

4.5.4.e.A.(a) Be a minimum compacted thickness of two (2) feet;

4.5.4.e.A.(b) Be compacted in six (6) inch lifts;

4.5.4.e.A.(c) Be no more permeable than 1×10^{-7} cm/sec based on laboratory and field testing;

4.5.4.e.A.(d) Be free of particles greater than two (2) inches in any dimension;

4.5.4.e.A.(e) Be placed without damaging the subgrade and leachate detection zone;

4.5.4.e.A.(f) Be placed during a period of time when both the air temperature and the soil temperature are above freezing so that neither the compacted clay nor the subbase are frozen;

4.5.4.e.A.(g) Have a slope of at least two percent (2%) to facilitate the drainage of leachate across the liner surface; and

4.5.4.e.A.(h) Be designed, operated, and maintained so that the physical and chemical characteristics of the liner and liner's ability to restrict the flow of solid waste, solid waste constituents, or leachate is not adversely affected by the leachate.

4.5.4.e.A.(i) The director may approve the substitution of three (3) feet of compacted soil for the required two (2) feet of compacted clay if equivalency of groundwater protection can be proven.

4.5.4.e.B. Synthetic component shall:

4.5.4.e.B.(a) Be no more permeable than 1×10^{-7} cm/sec based on laboratory and field testing;

4.5.4.e.B.(b) Have a minimum thickness of sixty (60) mils;

4.5.4.e.B.(c) Be installed in accordance with manufacturer's specifications under the supervision of an authorized representative of the manufacturer;

4.5.4.e.B.(d) Be inspected for uniformity, damage, and imperfections during construction or installation;

4.5.4.e.B.(e) Have a slope of at least two percent (2%) to facilitate the drainage of leachate across the liner surface;

4.5.4.e.B.(f) Be designed to withstand the calculated tensile forces acting upon the synthetic materials when installed on slopes greater than twenty-five percent (25%);

4.5.4.e.B.(g) Have field seams oriented parallel to the line of the maximum slope and not across the slope. In corners and irregularly-shaped locations, the number of field seams should be minimized. No horizontal seam should be less than five (5) feet from the toe of slope;

4.5.4.e.B.(h) Have the seam area free of moisture, dust, dirt, debris, and foreign material of any kind before seaming. Field seaming is prohibited when the ambient air temperature is below five degrees centigrade (5 degrees C), above forty degrees centigrade (40 degrees C), during precipitation or when winds are in excess of twenty (20) miles per hour;

4.5.4.e.B.(i) Be anchored a minimum of twenty-four (24) inches horizontally back from the edge of the top of the slope. The liner shall be anchored by cutting a trench twelve (12) to sixteen (16) inches in depth, laying the liner across three (3) sides of the trench, backfilling the trench, and compacting the backfill material; and

4.5.4.e.B.(j) Be installed under the direction of a field crew foreman with documented successful liner installation experience.

4.5.4.e.C. The certification on the construction of the composite liner compacted clay component and a Q.A./Q.C. report shall be submitted to the chief prior to the placement of the synthetic component.

4.5.4.e.D. The composite liner synthetic component

construction certification and a Q.A./Q.C. report shall be submitted to the chief prior to the placement of the leachate collection and protective cover zone.

4.5.4.f. Liner System Leachate Collection and Protective Cover Zone.

4.5.4.f.A. The leachate collection and protective cover zone shall:

4.5.4.f.A.(a) Create a flow zone between the composite liner and solid waste more permeable than 1×10^{-3} cm/sec based on laboratory and field testing. The leachate collection zone including the piping system must be designed and placed on a minimum slope of two percent (2%) to facilitate efficient leachate drainage and prevent ponding on the composite liner;

4.5.4.f.A.(b) Be at least eighteen (18) inches thick;

4.5.4.f.A.(c) Be constructed of soil or earthen materials to ensure that the hydraulic leachate head on the composite liner does not exceed one (1) foot at the expected flow capacity from the drainage area except during storm events;

4.5.4.f.A.(d) Be comprised of clean soil or earthen materials that contain no debris, plant material, rocks, or other solid material larger than one-quarter (1/4) inch in diameter and no material with sharp edges;

4.5.4.f.A.(e) Be graded, uniformly compacted, and smoothed;

4.5.4.f.A.(f) Be installed in a manner that prevents damage to the composite liner;

4.5.4.f.A.(g) Contain a perforated piping system capable of intercepting liquid within the leachate collection zone and conveying the liquid to control collection points. The piping system shall also meet the following:

4.5.4.f.A.(g)(A) The slope, sizing and spacing of the piping system shall assure that liquids drain efficiently from the leachate collection zone;

4.5.4.f.A.(g)(B) The distance between pipes in the piping system may not exceed one hundred (100) feet on center;

4.5.4.f.A.(g)(C) The pipes shall be installed perpendicular to the slope with continuous positive slope;

4.5.4.f.A.(g)(D) The minimum diameter of the perforated pipe shall be four (4) inches with a wall thickness of Schedule 40 or greater;

4.5.4.f.A.(g)(E) The pipe shall be capable of supporting anticipated loads without failure based on facility design;

4.5.4.f.A.(g)(F) Rounded stones or aggregates shall be placed around the pipes of the piping system. The stones or aggregates shall be sized to prevent clogging of the pipes and damage to the composite liner;

4.5.4.f.A.(g)(G) The piping system shall be installed in a fashion that facilitates cleanout, maintenance, and monitoring. Manholes or cleanout risers shall be located along the perimeter of the leachate detection piping system. The number and spacing of the manholes or cleanout risers shall be sufficient to insure proper maintenance of the piping system by water jet flushing or an equivalent method; and

4.5.4.f.A.(g)(H) The leachate collection system shall be cleaned and maintained as necessary; and

4.5.4.f.A.(h) Have geotextile material placed within the leachate collection system in such a manner as to prevent clogging of the piping system. The geotextile material must not be placed directly against pipes.

4.5.4.f.B. The leachate collection zone construction certification and a Q.A./Q.C. report shall be submitted to the chief prior to the placement of solid waste.

4.5.4.g. Liner System Engineer Certification.

4.5.4.g.A. The liner system shall be inspected during construction by a registered professional engineer.

4.5.4.g.B. Upon completion of construction of each major element of the liner system, subbase, leachate detection zone, composite liner, leachate collection zone, and protective cover and prior to the deposition of waste, the engineer shall certify to the chief under seal that the element or stage was constructed as approved in the permit.

4.5.4.h. Liner System Initial Placement of Solid Waste. The first eight (8) feet of solid waste placed on the protective cover may not contain material capable of penetrating or puncturing the protective cover.

4.5.5. Quality Assurance and Quality Control. The quality control measures and tests required by the Q.A./Q.C. plan under

Section 4.5.5 of these regulations shall be employed to insure that the engineering design and performance standards are achieved.

4.5.5.a. The Q.A./Q.C. inspector shall inspect those aspects of the subgrade preparation including, but not limited to, the following:

4.5.5.a.A. Site preparation, clearing, and grubbing;

4.5.5.a.B. Excavation of subgrade to required elevations;

4.5.5.a.C. Compaction of subgrade to design density at proper moisture content to achieve required strength and stability to support the liner;

4.5.5.a.D. Moisture content density and field strength test performed as required;

4.5.5.a.E. Compacted lift thickness;

4.5.5.a.F. Compaction equipment, weight, speed, and number of passes;

4.5.5.a.G. Method of moisture addition;

4.5.5.a.H. Proof rolling of subgrade; and

4.5.5.a.I. Fine finishing of the subgrade for acceptability of area to be lined.

4.5.5.b. The Q.A./Q.C. inspector shall inspect those aspects of the liner system including, but not limited to, the following:

4.5.5.b.A. Liner material to insure that the material being used meets specifications;

4.5.5.b.B. Liner material stockpiling, storage, and handling to prevent damage;

4.5.5.b.C. Inlet/outlet structure or penetration through the liner to insure compatibility with the liner system;

4.5.5.b.D. Final grades of liner to insure that they are within acceptable tolerances;

4.5.5.b.E. Final inspection of liner for acceptability prior to placement of cover material;

4.5.5.b.F. Compacted clay component of the liner with respect to the following:

4.5.5.b.F.(a) Compaction of liner to design density at the proper moisture content to achieve the required hydraulic conductivity and maintain strength and stability;

4.5.5.b.F.(b) Uniformity of compactive effort;

4.5.5.b.F.(c) Compacted lift thickness;

4.5.5.b.F.(d) Compacted liner thickness;

4.5.5.b.F.(e) Compaction equipment weight, speed, and number of passes;

4.5.5.b.F.(f) Moisture content, density, hydraulic conductivity, and field infiltration tests to ensure that they are performed as required; and

4.5.5.b.F.(g) Repairs and corrective or remedial action performed as required;

4.5.5.b.G. Synthetic liner component with respect to the following:

4.5.5.b.G.(a) Liner panel placement is in accordance with required configuration;

4.5.5.b.G.(b) Permanent and temporary anchoring procedures are followed;

4.5.5.b.G.(c) Overlap and seam width are in accordance with the design;

4.5.5.b.G.(d) The area of seaming is clean and supported;

4.5.5.b.G.(e) The uniformity and continuity of seams or welds;

4.5.5.b.G.(f) Cap strips are installed on all seams unless otherwise approved by the chief;

4.5.5.b.G.(g) Qualitative and quantitative field seaming tests are performed as required on imperfections in seams, wrinkles, and fishmouths and that all imperfections are repaired as required; and

4.5.5.b.G.(h) Corrective or remedial action taken;

4.5.5.b.H. The Q.A./Q.C. inspector shall inspect those aspects of the leachate detection, collection, and protective cover systems including, but not limited to, the following:

4.5.5.b.H.(a) Material stockpiling, storage, and handling to prevent damage;

4.5.5.b.H.(b) Drainage layer placement;

4.5.5.b.H.(c) Thickness of the detection and collection zones;

4.5.5.b.H.(d) Grain size analysis and relative density or compaction tests are performed as required;

4.5.5.b.H.(e) Uniformity of the soil;

4.5.5.b.H.(f) Grades and alignments within acceptable tolerances;

4.5.5.b.H.(g) Placement of stone or aggregate around piping system;

4.5.5.b.H.(h) Proper implementation of action to protect the piping system and the other components of the liner from the loads and stresses due to the traffic of backfilling equipment; and

4.5.5.b.H.(i) Proper placement of the filter cloth layers on the top of the leachate detection zone and within the leachate collection and protective cover zone; and

4.5.5.b.I. Daily Q.A./Q.C. reports shall be prepared by the Q.A./Q.C. inspectors and maintained in a bound log book which shall be available at the job site at all times for inspection by the chief or the director. All lab reports and field testing results shall be signed and dated by the inspector, and shall be attached to the log book reports. The log book reports shall include, but not be limited to, the following:

4.5.5.b.I.(a) Identification of project name, location, and date;

4.5.5.b.I.(b) Weather conditions including:

4.5.5.b.I.(b)(A) Temperature (daily high and low);

4.5.5.b.I.(b)(B) Barometric pressure;

4.5.5.b.I.(b)(C) Wind direction and speed;

4.5.5.b.I.(b)(D) Last precipitation event; and

4.5.5.b.I.(b)(E) Amount of precipitation;

4.5.5.b.I.(c) Description and location of construction currently underway;

4.5.5.b.I.(d) Equipment and personnel at work at each unit;

4.5.5.b.I.(e) Description and location of areas being tested or observed;

4.5.5.b.I.(f) Off-site material received and quality verification documentation;

4.5.5.b.I.(g) Calibration of test equipment;

4.5.5.b.I.(h) Description and location of remedial action taken; and

4.5.5.b.I.(i) Decisions and comments including conversations, directives, and directions for the following:

4.5.5.b.I.(i)(A) Acceptance or failure of inspection or tests;

4.5.5.b.I.(i)(B) Acceptance or failure of daily work unit performance;

4.5.5.b.I.(i)(C) Problems encountered and corrective action taken;

4.5.5.b.I.(i)(D) On-going corrective action;

4.5.5.b.I.(i)(E) In-field modifications; and

4.5.5.b.I.(i)(F) Assessment of overall project quality.

4.5.6. Revegetation Plan.

4.5.6.a. Function of Annual and Biennial Cover Crops. On areas where excessive erosion is likely to occur, rapid establishment of vegetative cover shall be required. Immediate seeding of approved annuals and biennials on such areas shall be considered as a means for achieving temporary vegetative cover only.

4.5.6.b. Minimum Requirements of Soil Amendments.

4.5.6.b.A. A minimum of six hundred pounds per acre (600 lbs/acre) of 10-20-10 or 10-20-20 fertilizer, or equivalent, shall be applied. Fertilizer rates based on soil analysis conducted by a qualified lab may be substituted for the minimum fertilizer rate.

4.5.6.b.B. Lime shall be required where soil pH is less than 5.5. Lime rates shall be such that a standard soil pH of 6.0 will be achieved.

4.5.6.b.C. Mulch shall be used on all disturbed areas. A list of approved materials and minimum rates to be applied is available from the chief.

4.5.6.c. Standards for Evaluating Vegetative Cover.

4.5.6.c.A. Final Revegetative Report. The report shall be submitted to the chief within sixty (60) days after the final cover or cap has been completed and contain the actual acreage planted including application rates of soil amendments, mulch, and seeding mixture.

4.5.6.c.B. Time for Inspection. Prior to the spring and fall planting seasons, the operator shall review all disturbed areas. Those areas that will not be disturbed again must be graded, limed, fertilized, mulched, and seeded. Those areas that have been previously seeded but are deficient of vegetative cover must be reseeded to establish a satisfactory stand of vegetation. Disturbed areas that may sit idle for an extended period shall be temporarily revegetated.

4.5.6.c.C. Standards for Perennials. Standards for legumes and perennial grasses shall require at least a ninety percent (90%) ground cover. Substandard areas shall not exceed one-quarter acre in size, nor total more than ten percent (10%) of the seeded area.

4.5.7. Miscellaneous. All facilities must be designed to meet the following requirements:

4.5.7.a. A method of controlling any dust or windblown debris must be included in the facility design. The factors which will be considered by the chief when evaluating alternative provisions for controlling dust and windblown debris includes the remoteness of the facility, natural screening and windbreaks, and waste types;

4.5.7.b. Access to the facility must be restricted through the use of fencing, natural barriers, or other methods approved in writing by the director;

4.5.7.c. A minimum separation distance of one hundred (100) feet must be maintained between the limits of waste filling and adjacent property line. A minimum distance of fifty (50) feet must be maintained between any permanent berms or excavations associated with the facility (excluding surface water diversion structures) and the adjacent property line;

4.5.7.d. The facility must be designed so that final grades in each phase are reached as soon as possible and the open area used for refuse filling is minimized;

4.5.7.e. The grade of the final surface of the facility shall not be less than one percent (1%) nor more than twenty-five percent (25%) unless otherwise approved by the chief as a part of the issued permit. Long slopes shall incorporate runoff control measures and terracing in order to minimize erosion. For sites having a natural slope greater than twenty-five percent (25%), a slope up to forty percent (40%) may be considered acceptable if terracing is incorporated at least every twenty-five (25) feet of vertical distance with runoff control.

4.5.7.f. All facilities which may obstruct flight patterns to instrument approach airports must follow Federal Aviation Administration guidelines in designing intermediate and final grades;

4.5.7.g. A permittee storing waste shall provide a sufficient number of containers to contain solid waste generated during periods between regularly scheduled collections;

4.5.7.h. An individual container or bulk container used for the storage of solid waste shall have the following characteristics:

4.5.7.h.A. The container shall be constructed to be easily handled for collection; and

4.5.7.h.B. The container shall be corrosion resistant and compatible with waste to be stored;

4.5.7.i. An individual container or bulk container used for the storage of putrescible solid waste shall also have the following characteristics:

4.5.7.i.A. The container shall be equipped with a tight fitting lid or cover, or otherwise sealed; and

4.5.7.i.B. The container shall be watertight, leak proof, insect proof, and rodent proof; and

4.5.7.j. A permittee that stores waste outside of containers shall tie the wastes securely in bundles of a size that can be readily handled for collection, and in a manner that minimizes litter, safety hazards, and fire hazards.

4.6. General Operational Requirements.

4.6.1. General Requirements.

4.6.1.a. No person may operate or maintain a solid waste facility after June 10, 1989 that does not conform to an approved plan of operation and the following:

4.6.1.a.A. Daily deposition of solid waste must be confined to as small an area as practical;

4.6.1.a.B. Provisions must be made to confine windblown material within the active disposal area;

4.6.1.a.C. At the conclusion of each day of operation, all windblown material must be collected and properly disposed of in the active area in accordance with the provisions of Section 4.6.1 of these regulations unless the operator establishes, to the satisfaction of the chief, that:

4.6.1.a.C.(a) All windblown material cannot be collected using reasonable efforts because of conditions beyond the control of the operator;

4.6.1.a.C.(b) Windblown material which can be collected using a reasonable effort has been collected and disposed of properly;

4.6.1.a.D. Putrescible materials must be immediately compacted and covered;

4.6.1.a.E. Access to the facility must be restricted through the use of fencing, natural barriers, or other methods approved in writing by the chief;

4.6.1.a.F. Procedures for excluding the receipt of hazardous waste. The application must contain an operator implemented program to detect and prevent attempts to dispose of hazardous wastes (regulated under Subtitle C of RCRA) and PCB wastes at the facility (regulated under the Toxic Substances Control Act). Measures that solid waste facility operators must incorporate in their programs to exclude receipt of hazardous waste, include at a minimum, random inspections of incoming loads, inspection of suspicious loads, recordkeeping of inspection results (including date, time, name of the hauling firm, driver, source of waste, vehicle identification numbers, and all observations made by the inspector), training of personnel to recognize hazardous waste, and procedures for notifying proper Division authorities if a regulated hazardous waste is found at the facility. All activities and information shall be reported on a form prescribed by the chief;

4.6.1.a.G. Effective means must be taken to limit access to the active disposal area to minimize exposure of the public to hazards;

4.6.1.a.H. Effective means must be taken to control flies, rodents, and other insects and vermin;

4.6.1.a.I. Equipment must be provided to control accidental fires and arrangements must be made with the local fire protection agency to acquire its services when needed;

4.6.1.a.J. A gate must be provided at the entrance to the operation and it must be kept locked when an attendant is not on duty;

4.6.1.a.K. The gate area must be policed at the beginning of each day of operation to remove any solid waste which has been indiscriminately dumped during periods when the facility was closed;

4.6.1.a.L. The facility shall be surrounded with rapidly growing trees, shrubbery, fencing, berms, or other appropriate means to screen it from the surrounding area and to provide a wind break;

4.6.1.a.M. Means acceptable to the chief must be taken to control dust resulting from facility operation;

4.6.1.a.N. Scavenging within the active disposal area is prohibited;

4.6.1.a.O. All burning is prohibited in accordance with regulations of the West Virginia Air Pollution Control Commission;

4.6.1.a.P. Provisions must be made for back-up equipment in the event of operating equipment breakdown;

4.6.1.a.Q. All topsoil within the facility construction limits shall be salvaged and stored within the property boundaries for use in facility closure. All stockpiled soil material which is not anticipated to be used within six (6) months must be seeded; and

4.6.1.a.R. All access roads to the active area of the operation shall be maintained in good condition so as to prevent sedimentation of drainage ways.

4.6.2. Solid Waste Placement.

4.6.2.a. Solid Waste Placement and Compaction.

4.6.2.a.A. Working Faces. Solid waste shall be placed for disposal only at designated working faces. Working face width shall be minimized and shall not exceed one hundred (100) feet unless otherwise approved by the chief. The slopes of working

faces shall not exceed thirty-three and one-third percent (33 1/3%). To prevent lateral migration of leachate through the final cover, all daily and intermediate cover from each lift of solid waste within twenty-five (25) feet of the final cover shall be removed.

4.6.2.a.B. Daily Cell Height. Daily cell height shall not exceed eight (8) feet in the vertical dimension, unless otherwise approved by the chief.

4.6.2.a.C. Layering and Compaction. Solid waste shall be placed in layers not exceeding two (2) feet in depth and compacted with a minimum of three (3) passes with an 815 Caterpillar compactor or other equipment of equivalent weight, or as otherwise approved by the chief.

4.6.2.b. Cover Material Application.

4.6.2.b.A. Daily Cover. A minimum thickness of six (6) inches of compacted cover material shall be applied to the entire exposed solid waste area at a minimum frequency of once each working day, or as approved by the chief. The time when daily cover is completed shall be noted in a log book maintained on-site.

4.6.2.b.B. Intermediate Cover. Solid waste fill surfaces which will remain exposed to weather for periods of in excess of thirty (30) days shall have a minimum of twelve (12) inches of compacted cover material applied within thirty (30) days of completion of the fill surface, unless otherwise approved by the chief.

4.6.2.b.C. Final Cover. Solid waste fill surfaces which will receive no further solid waste deposits shall place final cover in accordance with Section 6.1.5.a.A of these regulations.

4.6.2.b.D. Availability. Cover material shall be available from the facility site or other designated sources in sufficient quantities to provide:

4.6.2.b.D.(a) Six (6) inches of compacted regular cover material.

4.6.2.b.D.(b) Twelve (12) inches of compacted intermediate cover material.

4.6.2.c. Waste Placement in Winter. For all landfills designed with liners, a layer of waste at least four (4) feet thick, or an adequate amount of other frost protection material, must be placed over the granular blanket in all portions of the lined area prior to December 31 of the year in which the liner was constructed. Waste may not be placed during the winter on any

portion of the liner not having a four (4) foot thick layer of waste or other adequate frost protection material covering it after December 31 of each year. Those portions of the clay liner must be investigated for density and effects from freeze-thaw as specified by the chief and must be recompact and recertified during the next construction season if required, prior to waste placement. These requirements may be waived by the chief upon the request of the permittee.

4.7. Acceptable Wastes.

4.7.1. Industrial Solid Waste Facilities may receive the following types of solid wastes:

- 4.7.1.a. Compost;
- 4.7.1.b. Construction waste;
- 4.7.1.c. Demolition waste;
- 4.7.1.d. Industrial waste;
- 4.7.1.e. Inert waste;
- 4.7.1.f. Non-municipal incinerator ash;
- 4.7.1.g. Putrescible waste;
- 4.7.1.h. Scrap metal;
- 4.7.1.i. Sludge;
- 4.7.1.j. Bulky goods; and

4.7.1.k. Petroleum-contaminated soils that do not contain free liquids. This requirement may be met by adding or blending sand, sawdust, lime, soil or other absorbent materials prior to disposal.

- 4.7.1.l. Other materials approved by the director.

4.7.2. Landfills may not receive the following wastes:

- 4.7.2.a. Free liquids;
- 4.7.2.b. Regulated hazardous wastes;
- 4.7.2.c. Unstabilized sewage sludge or sludges that have not been dewatered;
- 4.7.2.d. Pesticide containers that have not been triple rinsed and crushed;

4.7.2.e. Drums that are not empty and not crushed, except as provided under Section 4.14.5 of these regulations, unless such drums are full and contain solid waste at least twenty percent (20%) solid by weight with no free liquid. Drums so filled shall not contain hazardous waste and must be labeled as non-hazardous waste, with contents identified;

4.7.2.f. Waste which may be infectious waste, as defined in Section 2.24 of these regulations, unless:

4.7.2.f.A. The waste has not been compacted and recognizable treated infectious medical waste (i.e., rendered noninfectious) is labeled prior to being transported to the disposal site. Treated medical waste that will pass through a screen with a one half inch (1/2") grid will be considered not recognizable. The labeling shall be sized and attached as follows; a label or tag shall be securely attached to the outer layer of packaging and shall be clearly visible and legible, indelible ink shall be used to complete the information on the label or tag, and the label or tag shall be at least three (3) inches by five (5) inches in size. The following information shall be included on the label or tag:

4.7.2.f.A.(a) The name, address, and business telephone number of the generator;

4.7.2.f.A.(b) The name, address, and business telephone numbers of the facility at which the waste was rendered noninfectious;

4.7.2.f.A.(c) The weight of the treated noninfectious medical waste and the method of treatment;

4.7.2.f.A.(d) A signed and dated certification by the facility at which the waste was rendered noninfectious which states: "I hereby certify under penalty of law that this waste is not infectious medical waste as defined in Solid Waste Management Regulations 47 CSR 38A and 38B, or has been rendered noninfectious in accordance with procedures required by Infectious Medical Waste regulations 64 CSR 56"; and

4.7.2.f.A.(e) Such labels, tags or other accompanying documentation shall be maintained on file at the solid waste facility receiving that waste for disposal, with the exception that labels permanently attached to the waste are not required to be maintained on file.

4.7.2.f.B. Sharps have been rendered noninfectious and encapsulated in a solid state prior to transport for disposal with the capsulation labeled in accordance with Section 4.7.2.f.A of this rule.

4.7.2.f.C. The infectious medical waste is generated by a member of a household during self health care or by the provision of health care services within the residence, except that the householder shall place sharps in a container with a high degree of puncture resistance prior to discarding them.

NOTE: General information from Infectious Medical Waste regulations, 64 CSR 56 - All bags containing infectious medical waste shall be red in color except that infectious medical waste that is to be steam treated shall be contained in orange bags and marked with autoclave tape or other heat-activated ink which will indicate whether or not the appropriate temperature, as required by 64 CSR 56, has been reached. Both red and orange bags shall be imprinted with the international biohazard symbol and the words "infectious medical waste" or "biomedical waste" or "biohazard" if treatment is to occur off-site. Waste contained in red bags shall be considered infectious medical waste and managed as infectious medical waste. Waste contained in orange bags shall be managed as infectious medical waste prior to steam treatment and as solid waste after steam treatment, but shall not be removed from the orange bags. Red or orange colored bags may not be enclosed in bags of a different color.

4.7.2.g. Waste containing PCBs at concentrations of fifty parts per million (50 ppm) or greater.

4.7.2.h. Municipal incinerator ash; or

4.7.2.i. Petroleum-contaminated soils containing free liquids.

4.8. Leachate Management.

4.8.1. General Requirements.

4.8.1.a. Leachate must be removed from all collection tanks, manholes, lift stations, sumps, or other structures used for leachate storage as often as necessary to allow for gravity drainage of leachate from the facility at all times.

4.8.1.b. Any liquid which comes in contact with waste or accumulates in a portion of the facility where active waste disposal operations are occurring must be handled as leachate and properly treated as specified in Section 4.8 of these regulations unless otherwise approved by the chief in writing.

4.8.1.c. All leachate collection and detection lines must be cleaned with a water jet cleanout device or equivalent immediately after construction, after the first layer of waste has been placed over an entire phase and annually thereafter.

4.8.1.d. Except as otherwise provided in Sections 4.8.1.e

through 4.8.1.f of these regulations, leachate must be collected, treated, and then directly discharged into a POTW or other treatment facility permitted by the Division. The leachate collection and treatment facility must be in place and operable prior to the commencement of landfill operations or with approval of the chief, discharge to a POTW.

4.8.1.e. Leachate may be collected, treated on-site, and then discharged into a receiving stream under a permit issued by the Division under W. Va. Code §20-5A, and the regulations promulgated thereunder, if the chief approves this method in the solid waste facility permit issued under these regulations. Onsite treatment and discharge to a receiving stream will not be allowed unless direct discharge into a POTW or other permitted facility is not reasonably possible.

4.8.1.f. Leachate may be collected, treated on-site, and then be applied to the active portion of the disposal area via spray irrigation if the chief approves this method in the solid waste facility permit issued under these regulations. On-site treatment and subsequent land application will not be allowed unless, at a minimum:

4.8.1.f.A. Discharge into a POTW or other permitted treatment facility is not possible;

4.8.1.f.B. Discharge of the treated leachate into a receiving stream in a manner consistent with W. Va. Code §20-5A, and the regulations promulgated thereunder, is not attainable; and

4.8.1.f.C. Spray irrigation is approved in the solid waste facility permit issued under these regulations. Such approval may be for a limited period of time or as part of a leachate treatment system.

4.8.1.g. For the first three (3) years following initial discharge of leachate into the collection and handling system, but not thereafter unless otherwise approved by the chief, leachate may be handled by vehicular transportation for leachate treatment at an off-site treatment facility. Vehicular transportation of leachate to an off-site treatment facility will not be allowed unless, at a minimum, one of the following applies:

4.8.1.g.A. Direct discharge into a POTW or other permitted treatment facility is attainable within three (3) years at a reasonable cost; or

4.8.1.g.B. Discharge of treated leachate into a receiving stream in a manner consistent with W. Va. Code §20-5A, and the promulgated regulations thereunder, is attainable within three (3) years.

4.8.1.h. If a permittee using vehicular transportation to and treatment at an off-site treatment facility loses the ability to dispose of leachate at that facility and is unable to secure an alternate off-site treatment facility acceptable to the chief within fifteen (15) days from loss of its approved treatment facility, implementation of the treatment plan required by Section 4.8.1.f of these regulations must begin immediately. This leachate treatment system must be completed and operational by the date on which off-site treatment becomes unavailable.

4.8.1.i. In conjunction with any of the treatment methods in Section 4.8.1 of these regulations, the temporary recirculation of leachate may be utilized if the following conditions exist:

4.8.1.i.A. The area subject to leachate recirculation previously has been filled with solid waste;

4.8.1.i.B. There is sufficient waste capacity to absorb the leachate;

4.8.1.i.C. The area subject to leachate recirculation is underlain by a leachate collection system; and

4.8.1.i.D. Leachate recirculation is conducted with a piping system approved by the chief located under the intermediate cover and causes no odors, runoff, or ponding.

4.8.1.j. The permittee shall immediately notify the chief and describe remedial steps to be taken if:

4.8.1.j.A. Operation of the leachate treatment facility under these regulations cannot prevent the facility from:

4.8.1.j.A.(a) Violating the terms of its permit, these regulations, the Clean Water Act and the regulations promulgated thereunder, or W. Va. Code §20-5A and the regulations promulgated thereunder; or

4.8.1.j.A.(b) Causing surface water pollution or groundwater degradation, contamination, or pollution;

4.8.1.j.B. The facility is generating a quality or quantity of leachate that exceeds the design capacity of the treatment system;

4.8.1.j.C. For leachate treatment plans that include vehicular transportation of leachate to an off-site treatment plant, the total flow of leachate from the solid waste facility exceeds thirty thousand (30,000) gallons in a period of thirty (30) consecutive days;

4.8.1.j.D. The contractual agreement for leachate treatment by an off-site treatment system is breached or expired; or

4.8.1.j.E. The quality or quantity of solid waste being disposed at the facility changes from that set forth in the permit.

4.8.2. Leachate Treatment System, Design, and Construction.

4.8.2.a. Tanks, containers, and impoundments for storing leachate before or during treatment must be constructed and lined in accordance with Sections 4.8.2 and 4.8.3 of these regulations.

4.8.2.b. A leachate treatment system must contain impoundments or tanks, for the storage of leachate prior to its treatment to effluent standards, that have a flow equalization and surge capacity equal to at least thirty (30) days of the leachate production estimated from the facility or two hundred and fifty thousand (250,000) gallons, whichever is greater, unless a smaller capacity is approved by the chief.

4.8.2.c. Impoundments or tanks must be aerated as necessary to prevent and control odors.

4.8.2.d. The storage capacity of impoundments and tanks at a facility must be increased prior to each major phase of construction and as otherwise necessary.

4.8.2.e. Necessary collection and containment systems must be installed prior to the deposition of solid waste at the facility. A treatment or handling system approved by the chief must be installed prior to the storage or disposal of solid waste.

4.8.2.f. Construction of the leachate treatment facility and associated works must be supervised by a registered professional engineer. At the completion of construction of the facility, or at the completion of a modification to the capacity or treatment technique at the facility, the operator must submit to the chief a certification under the seal of a registered professional engineer that the work was completed in accordance with the plans and designs in the operator's permit.

4.8.2.g. A modification to a leachate treatment system must be completed within one (1) year after construction is initiated, unless the chief specifies a shorter period of time in the permit modification.

4.8.3. Liquid Storage.

4.8.3.a. Aboveground and Onground Tank Requirements.

4.8.3.a.A. Tanks may be constructed of concrete, steel, or other material approved by the chief. Tanks must be designed to prevent structural failure and be supported on a well-drained stable foundation which prevents movement, rolling, or settling of the tank.

4.8.3.a.A.(a) Bottoms of steel tanks that rest on earthen material must be cathodically protected with either sacrificial anodes or an impressed current system which is designed, fabricated, and installed in accordance with the approved engineering report.

4.8.3.a.A.(b) The exterior surfaces of all aboveground and onground steel storage tanks must be protected by a primer coat, a bond coat, and two (2) or more final coats of paint or have at least an equivalent surface coating system designed to prevent corrosion and deterioration.

4.8.3.a.A.(c) The interior of all aboveground and onground tanks must consist of a material or must be lined with a material, compatible to the liquid being stored.

4.8.3.a.B. All aboveground and onground tanks must have a secondary containment system which may consist of dikes, liners, pads, ponds, impoundments, curbs, ditches, sumps, or other systems capable of containing the liquid stored.

4.8.3.a.B.(a) The design volume for the secondary containment system must be one hundred and ten percent (110%) of the volume of either the largest tank within the containment system or the total volume of all interconnected tanks, whichever is greater.

4.8.3.a.B.(b) The secondary containment system must be constructed of a material compatible with the liquid stored. The containment system must be constructed of either:

4.8.3.a.B.(b)(A) A minimum one (1) foot layer of compacted soil with a maximum permeability of 1×10^{-7} centimeters per second;

4.8.3.a.B.(b)(B) A concrete pad of a sufficient thickness to maintain integrity for the lifetime of the tank with a corrosion resistant coating; or

4.8.3.a.B.(b)(C) A geosynthetic liner of a minimum thickness equal to sixty (60) mils.

4.8.3.a.B.(c) A system must be designed to contain and remove storm water from the secondary containment area. Provisions must be included for the removal of any accumulated

precipitation (rain, snow or ice) and be initiated within twenty--four (24) hours or when ten percent (10%) of the storage capacity is reached; whichever occurs first. Disposal must be in compliance with W. Va. Code §§20-5A and 20-5F and all applicable federal and State regulations.

4.8.3.a.C. All aboveground and onground tanks must be equipped with an overfill prevention system which may include, but not be limited to: level sensors and gauges, high level alarms or automatic shutoff controls. The overfill control equipment must be inspected weekly by the facility operator to ensure it is in good working order.

4.8.3.a.D. The exposed exterior of all aboveground and onground tanks must be inspected weekly by the facility operator for adequacy of the cathodic protection system, leaks, corrosion, and maintenance deficiencies. Interior inspection of tanks must be performed whenever the tank is drained. If the inspection reveals a tank or equipment deficiency, leak or any other deficiency which could result in failure of the tank to contain the liquid, remedial measures must be taken immediately to eliminate the leak or correct the deficiency. Inspection reports must be maintained and made available to the chief upon request for the lifetime of the liquid storage system.

4.8.3.a.E. All uncovered tanks must have a minimum two (2) feet freeboard. Odor and vector control must be practiced when necessary.

4.8.3.b. Underground Tank Requirements.

4.8.3.b.A. Underground tank systems including tanks and piping must be placed a minimum of two (2) feet above the seasonally high groundwater table and a minimum of two (2) feet vertical separation must be maintained between bedrock and the lowest point of the tank. The tank system must be installed in accordance with manufacturer installation instructions.

4.8.3.b.B. Tank systems may be constructed of fiberglass reinforced plastic, steel that is cathodically protected and coated with a suitable dielectric material, steel that is clad with fiberglass, or any other materials approved by the chief.

4.8.3.b.C. The secondary containment and a continuous leak detection system must be installed in the form of a double-walled tank, designed as an integral structure so that any release from the inner tank is completely contained by the outer shell.

4.8.3.b.C.(a) The interstitial space must be monitored at least once per week by the facility operator for tightness using pressure monitoring, vacuum monitoring, electronic monitoring or an approved equivalent method.

4.8.3.b.C.(b) Any tank system vulnerable to corrosion must be protected from both corrosion of the primary tank interior and the external surface of the outer shell.

4.8.3.b.C.(b)(A) All resistant coatings applied to the primary tank interior must be chemically compatible with the liquid to be stored.

4.8.3.b.C.(b)(B) All cathodic protection systems must be tested within six (6) months of installation and at least every three (3) years thereafter unless otherwise specified by the chief. A deficiency in the cathodic protection system must be corrected upon discovery.

4.8.3.b.D. All underground tanks must be equipped with an overfill prevention system which may include but not be limited to: level sensors and gauges, high level alarms, or automatic shutoff controls. The overfill control equipment must be inspected weekly by the facility operator to ensure it is in good working order.

4.8.3.b.E. Inspection and leak detection monitoring reports must be maintained and made available upon request for the lifetime of the liquid storage system.

4.8.3.c. Requirements For New Surface Impoundment Constructed After November 4, 1988.

4.8.3.c.A. Any surface impoundment must be constructed a minimum of five (5) feet above the seasonally high groundwater table. A minimum of four (4) feet vertical separation must be maintained between the base of the constructed liner and bedrock. Any surface impoundment that meets the definition of a "dam" found in 47 CSR 32 §2.6 must first obtain a certificate of approval for a dam before a solid waste facility permit can be approved under these regulations.

4.8.3.c.B. Surface impoundments subject to these regulations must be constructed with a liner system consisting of a minimum of two (2) liners and a leak detection system. Surface impoundments currently in use that do not have liners and a leak detection system as prescribed in Section 4.8.3.c.B of these regulations shall either be closed or retrofitted to conform to these regulations by June 10, 1991. Liner construction must include the following:

4.8.3.c.B.(a) The top liner must be a synthetic liner with a minimum thickness equal to sixty (60) mils. A protective cover should be placed over this liner to prevent damage during clean-out operations.

4.8.3.c.B.(b) A leak detection and removal system

must be installed between the two (2) synthetic liners.

4.8.3.c.B.(c) The lower composite liner must consist of a minimum of two (2) feet of compacted clay with a maximum permeability of 1×10^{-7} centimeters per second overlain by a synthetic liner that is at least sixty (60) mils thick.

4.8.3.c.B.(d) Quality assurance and quality control testing must be performed by the project engineer in conformance with the requirements identified in Section 4.5.5 of these regulations.

4.8.3.c.C. A minimum of two (2) feet of freeboard must be maintained in all surface impoundments. Odor and vector control must be practiced when necessary.

4.8.3.c.D. A minimum of three (3) groundwater monitoring wells, one upgradient and two (2) downgradient of any surface impoundment may be required to be installed and sampled at the discretion of the chief in accordance with these regulations.

4.8.3.d. Closure of Liquid Storage Facilities.

4.8.3.d.A. The permittee or operator of the liquid storage facility must prepare a written closure plan for the liquid storage facility and submit the plan with the permit application for the solid waste management facility.

4.8.3.d.B. The permittee or operator must complete closure activities in accordance with the approved closure plan and within one hundred eighty (180) days after liquid collection has ceased.

4.8.3.d.C. At closure, all liquid and solid waste must be removed from the tank or surface impoundment, connecting lines, and any associated secondary containment systems. All solid waste removed must be properly handled and disposed of in conformance with the provisions of the Act and applicable federal and State requirements. All connecting lines must be disconnected and securely capped or plugged.

4.8.3.d.C.(a) Underground tanks must be removed or thoroughly cleaned to remove traces of waste and all accumulated sediments and then filled to capacity with a solid inert material, such as clean sand or concrete slurry. If groundwater is found to be contaminated from the tank, the tank and surrounding contaminated soil must be removed and appropriately disposed. Other corrective actions to remediate the contaminant plume may be required by the chief.

4.8.3.d.C.(b) Accessways to aboveground and

onground tanks must be securely fastened in place to prevent unauthorized access. Tanks must either be stenciled with the date of permanent closure or removed. The secondary containment system must be perforated to provide for drainage.

4.8.3.d.C.(c) For surface impoundments, all waste residues, contaminated system components (e.g., liners) contaminated subsoils, structures, and equipment contaminated with waste must be removed and appropriately disposed. If the groundwater surrounding the impoundment is contaminated, other corrective actions to remediate a contaminant plume may be required by the chief. If the groundwater surrounding the impoundment is found not to be contaminated, the liner system may remain in place if drained, cleaned to remove all traces of waste, and both liners punctured so that drainage is allowed. The impoundment is to be backfilled and regraded to the surrounding topography.

4.8.4. Leachate Analysis. The permittee shall comply with the following sampling requirements at all monitoring points of the leachate collection and detection system as prescribed by the chief:

4.8.4.a. On a daily basis, the flow rate and volume of flowing liquids from the leachate collection and detection systems shall be determined; and

4.8.4.b. On a quarterly basis, the chemical composition of the leachate flowing into the leachate treatment system shall be determined through the analysis of the leachate for the following parameters: alkalinity, ammonia nitrogen, arsenic, barium, bicarbonate, biochemical oxygen demand (BOD-5day), cadmium, calcium, chemical oxygen demand (COD), chloride, chromium, cyanide, iron, lead, manganese, magnesium, mercury, nickel, nitrate, Ph, potassium, selenium, silver, sodium, sulfate, specific conductance, total dissolved solids (TDS), total organic compounds (TOC), total phenolic materials, total suspended solids (TSS), zinc, and any other parameter specified by the chief in writing. In addition to the above parameters, coal combustion facilities shall include the following: aluminum, antimony, beryllium, boron, copper, fluoride, hexavalent chromium, molybdenum, thallium, titanium, total phosphorus, and vanadium. Any of the above parameters may be deleted from the analysis requirement upon approval of the chief.

4.8.4.b.A. The monitoring parameters listed in Section 4.8.4.b of these regulations shall be reported as total metals unless otherwise specified by the chief.

4.9. Water Quality Standards. All permittees are required under the provisions of W. Va. Code §20-5A and 46 CSR 1 to comply with all applicable water quality standards.

4.10. Landfill Gas Management. Except for facilities that can

demonstrate that the solid waste disposed of at the facility does not generate decomposition gases that are hazardous or toxic, decomposition gases generated within a landfill must be controlled to avoid hazards to health, safety, or property. Measures to control decomposition gases must be undertaken in accordance with the following requirements:

4.10.1. Gas Control. Effective means must be utilized to prevent the migration of explosive gases generated by the waste fill. At no time may the concentration of explosive gases in any facility structure (excluding the leachate collection system or gas control or recovery system components) or in the soils or air at or beyond the facility property boundary exceed twenty-five percent (25%) of the lower explosive limit for such gases. The chief may require the concentration of explosive gases not to exceed the lower detection limit for that gas at the facility property boundary.

4.10.2. Gas Monitoring Program. An ongoing gas monitoring program must be initiated to ensure that the standards of Section 4.10.1 of these regulations are met. The type and frequency of monitoring must be approved by the chief and be based on the following factors:

4.10.2.a. Soil conditions;

4.10.2.b. Hydrogeologic conditions surrounding the disposal area;

4.10.2.c. Hydraulic conditions surrounding the disposal site; and

4.10.2.d. The location of any man-made structures and property boundaries.

4.10.3. Notification. Upon detection of methane or other explosive gas levels exceeding the limits specified in section 4.10.1 of these regulations, the landfill owner and the appropriate officials identified in the contingency plan must immediately take all steps necessary to ensure safety and protection of health and shall immediately notify the chief.

4.11. Monitoring.

4.11.1. Groundwater Monitoring Program. The groundwater sampling and analysis requirements for the groundwater monitoring system are as follows:

4.11.1.a. The groundwater monitoring program shall include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of the groundwater quality at the background and downgradient

wells. At a minimum, the program must include procedures and techniques for:

- 4.11.1.a.A. Sample collection;
- 4.11.1.a.B. Sample preservation and shipment;
- 4.11.1.a.C. Analytical procedures; and
- 4.11.1.a.D. Chain of custody control.

4.11.1.b. The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure constituents in groundwater samples. The sampling and analysis methods should follow the approved quality control plan, and the chief may require resampling if he believes the samples were not properly sampled or analyzed.

4.11.1.c. The permittee shall determine the groundwater flow rate and direction of groundwater in the uppermost significant aquifer at least annually.

4.11.1.d. The permittee shall establish background groundwater quality for each of the monitoring parameters of constituents required in the particular groundwater monitoring program that applies to the facility, as determined by the Phase I, Phase II, or Phase III monitoring program. The minimum number of samples used to establish background groundwater quality must be consistent with the appropriate statistical procedures as specified in Section 4.11.1.g of these regulations.

4.11.1.e. Background quality at existing facilities may be based on sampling of wells that are not upgradient from the waste management area where:

4.11.1.e.A. Hydrogeologic conditions do not allow the permittee to determine what wells are upgradient; and

4.11.1.e.B. Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells.

4.11.1.f. The permittee shall determine whether there is a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the facility, as determined for Phase I, Phase II, and Phase III monitoring programs. The permittee shall make these statistical determinations each time he assesses groundwater quality.

4.11.1.f.A. In determining whether a statistically significant increase has occurred, the permittee shall compare the groundwater quality at each monitoring well at the waste management unit boundary for each parameter or constituent to the background value for that parameter or constituent, according to the statistical procedures.

4.11.1.f.B. The permittee shall determine whether there has been a statistically significant increase at each monitoring well at the facility waste management unit boundary immediately after completion of sampling.

4.11.1.g. The permittee must employ one of the following statistical procedures in combination with the designated sampling requirement to determine a statistically significant increase:

4.11.1.g.A. A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The procedure must include estimation and testing of the contrasts between each downgradient well's mean and background mean level for each constituent;

4.11.1.g.B. An analysis of variance based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The procedure must include estimation and testing of the contrasts between each downgradient well's mean and the background mean level for each constituent;

4.11.1.g.C. Tolerance or prediction interval procedure in which a tolerance interval for each constituent is established from the distribution of the background data, and the level of each constituent in each downgradient well is compared to the upper tolerance or prediction limit; or

4.11.1.g.D. A control chart approach that gives control limits for each constituent.

4.11.1.h. The chief may establish an alternative sampling procedure and statistical test for any of the constituents required to be tested for in Phase II or III monitoring, as required to protect human health and the environment. Factors to consider for establishing this alternative statistical procedure include:

4.11.1.h.A. If the distributions for different constituents differ, more than one procedure may be needed. The permittee must show that the normal distribution is not appropriate if using a nonparametric or other methodology not requiring an assumption of normality. For any statistic not based on a normal distribution, a goodness of fit test shall be conducted to

demonstrate that the normal distribution is not appropriate. Other tests shall be conducted to demonstrate that the assumptions of the statistic or distribution are not grossly isolated;

4.11.1.h.B. Each parameter or constituent is to be tested for separately. Each time that a test is done, the test for individual constituents shall be done at a type I error level no less than 0.01. A multiple comparison procedure may be used at a type I experiment-wide error rate no less than 0.05. The owner or operator must evaluate the ability of the method to detect contamination that is actually present and may be required to increase the sample size to achieve an acceptable error level;

4.11.1.h.C. The statistical procedure should be appropriate for the behavior of the parameters or constituents involved. It should include methods for handling data below the limit of detection. The permittee should evaluate different ways of dealing with values below the limit of detection and choose the one that is most protective of human health and the environment. In cases where there is a high proportion of values below limits of detection, the permittee may demonstrate that an alternative procedure is more appropriate; and

4.11.1.h.D. The statistical procedure used should account for seasonal and spatial variability and temporal correlation.

4.11.1.i. If contamination is detected by any of the statistical tests, and the chief or permittee suspects that detection is an artifact caused by some feature of the data other than contamination, the chief may specify that statistical tests of trend, seasonal variation, autocorrelation, or other interfering aspects of the data be done to establish whether the significant result is indicative of detection of contamination or resulted from natural variation.

4.11.1.i.A. The permittee shall determine whether or not there is a statistically significant increase (or decrease, in the case of Phase I) over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the landfill. The permittee must make these statistical determinations each time he assesses groundwater quality at the landfill.

4.11.1.i.B. In determining whether a statistically significant increase or decrease has occurred, the permittee shall compare the groundwater quality of each parameter or constituent at each monitoring well to the background value of that parameter or constituent, according to the statistical procedures specified under Section 4.11 of these regulations.

4.11.1.i.C. Within a reasonable time period after

completing sampling as determined by the chief, the permittee shall determine whether there has been a statistically significant increase or decrease over background at each monitoring well.

4.11.2. Phase I Monitoring Program.

4.11.2.a. Phase I monitoring is required at all landfills and solid waste disposal surface impoundments except as otherwise provided in these regulations and in Sections 4.11.3 and 4.11.4 of these regulations.

4.11.2.b. For Class F and G solid waste facilities, the chief shall specify in the permit those parameters to be included in a Phase I monitoring program as appropriate for the types of waste to be disposed in a particular solid waste facility or which are reasonably expected to be present. Such proposed monitoring parameters shall be submitted to the chief as part of the permit application process. For coal combustion by-product facilities, the monitoring parameters shall consist of some combination of the following: pH, temperature, alkalinity, hardness, total dissolved solids, total suspended solids, specific conductance, total organic carbon, calcium, magnesium, antimony, beryllium, fluoride, thallium, titanium, total phosphorus, nitrate nitrogen, silver, iron, manganese, aluminum, chloride, sulfate, arsenic, copper, nickel, selenium, zinc, barium, mercury, total and hexavalent chromium, lead, boron, molybdenum, cadmium, and vanadium.

4.11.2.b.A. The monitoring parameters listed in Section 4.11.2.b of these regulations shall be reported as total metals unless otherwise specified by the chief.

4.11.2.c. The permittee shall monitor quarterly. The chief may require more frequent monitoring on a site-specific basis by considering aquifer flow rate and resource value of the groundwater.

4.11.2.d. Unless otherwise directed by the chief, if the permittee determines that there is a statistically significant increase over background for any Phase I parameter at any monitoring well, he must:

4.11.2.d.A. Notify the chief within fourteen (14) days of this finding. The notification must indicate which Phase I monitoring parameters have shown statistically significant increases over background levels;

4.11.2.d.B. Within a thirty-day period, repeat the sampling of the groundwater in all monitoring wells and determine the concentration of all constituents designated under Section 4.11.2.b of these regulations that are present in the groundwater; and

4.11.2.d.C. If the repeat sampling indicates that no statistically significant increase over background levels has occurred, continue monitoring at the Phase I level; or

4.11.2.d.D. If the repeat sampling confirms that a statistically significant increase over background levels has occurred, establish a Phase II monitoring program meeting the requirements of Section 4.11.3 of these regulations within thirty (30) days of confirmation.

4.11.3. Phase II Monitoring Program.

4.11.3.a. Phase II monitoring is required whenever statistically significant increases over background have been detected between background (upgradient) and downgradient monitoring wells for any Phase I monitoring parameters.

4.11.3.b. A Phase II monitoring program must include quarterly monitoring of all constituents specified in Phase I and any other parameters specified by the chief.

4.11.3.b.A. For those Phase II constituents that are determined to be below the detectable limits of the standard analytical methods, the chief may reduce the required monitoring frequency. In no case may the monitoring frequency be less than once per year.

4.11.3.b.B. If the permittee finds no Phase II constituent in groundwater during the initial sampling made pursuant to a Phase II monitoring program, he may petition the chief for a reinstatement of the Phase I monitoring program. Within ninety (90) days of the receipt of such a petition, the chief shall either approve or deny the petition and notify the permittee of his decision in writing.

4.11.3.c. If the permittee determines that there is a statistically significant increase of any Phase II monitoring parameter specified in Section 4.11.3.b of these regulations at any monitoring well at the facility boundary, he must notify the chief of this finding in writing within fourteen (14) days. The notification must indicate which parameters have shown statistically significant increases over background levels;

4.11.3.d. Within one hundred and eighty (180) days submit to the chief:

4.11.3.d.A. An engineering feasibility plan for a corrective action program necessary to meet the requirements for corrective action under Section 4.11.5 of these regulations; and

4.11.3.d.B. Implement a Phase III monitoring program.

4.11.3.e. If the permittee determines that there is a statistically significant increase of parameters or constituents specified at any monitoring well, he may demonstrate that a source other than the landfill unit caused the increase or that there is an error in sampling, analysis, or evaluation. In making this demonstration, the permittee must:

4.11.3.e.A. Notify the chief in writing within fourteen (14) days of determining a statistically significant increase that he intends to make such a demonstration;

4.11.3.e.B. Within ninety (90) days, or such additional time period as approved by the chief, submit a report to the chief which demonstrates that a source other than the facility caused the increase or that the increase resulted from error in sampling, analysis, or evaluation; and

4.11.3.e.C. Continue to monitor in accordance with the Phase III monitoring program.

4.11.4. Phase III Monitoring Program.

4.11.4.a. Phase III monitoring is required whenever any Phase II monitoring parameter shows a statistically significant increase over background.

4.11.4.a.A. For Class F or G solid waste facilities, the chief shall specify in the permit those parameters to be included in a Phase III monitoring program as appropriate for the types of waste to be disposed in a particular solid waste facility or which are reasonably expected to be present.

4.11.4.b. The compliance period for Phase III monitoring programs is equal to the active life of the facility plus the required closure period unless the permittee can demonstrate that every Phase III constituent present in groundwater monitoring samples is at the concentration approved by the chief and can further demonstrate that the designated level has not been exceeded for a period of three (3) consecutive years. Upon completion of these demonstrations, the permittee may petition the chief for a reinstatement of the Phase II monitoring program. Within ninety (90) days of the receipt of such a petition, the chief shall either approve or deny the petition and notify the permittee of his decision in writing.

4.11.4.c. If the permittee is engaged in a corrective action program at the end of the minimum compliance period specified in Section 4.11.4.b of these regulations, the compliance period is extended until the owner or operator can demonstrate that the designated groundwater concentration levels have not been exceeded for a period of three (3) consecutive years.

4.11.4.d. Phase III monitoring parameters and constituents must include:

4.11.4.d.A. All Phase I monitoring parameters; and

4.11.4.d.B. All other parameters detected at levels above background or specified by the chief.

4.11.4.e. The chief shall determine an appropriate monitoring frequency on a site-specific basis by considering aquifer flow rate. The following minimum frequencies apply:

4.11.4.e.A. Quarterly for those constituents identified in Section 4.11.4.d of these regulations that exceed background concentrations; and

4.11.4.e.B. Annually for all other specified constituents.

4.11.4.f. If the permittee determines that there is a statistically significant increase over background for any constituent at any monitoring well, he shall:

4.11.4.f.A. Notify the chief of this finding in writing within fourteen (14) days. The notification shall indicate which parameters or constituents have shown statistically significant increases over background levels;

4.11.4.f.B. Within a thirty (30) day time period, repeat the sampling of the groundwater in all monitoring wells and determine the concentrations of all constituents required in Section 4.11.4.d. of these regulations; and

4.11.4.f.C. If the repeat sampling indicates that no statistically significant increase over background levels has occurred, return to monitoring at the Phase II level; or

4.11.4.f.D. If the repeat sampling confirms that a statistically significant increase over background levels has occurred:

4.11.4.f.D.(a) Within ninety (90) days of confirmation submit to the chief the following information:

4.11.4.f.D.(a)(A) An evaluation of the concentration of any Phase III constituent found in groundwater at each monitoring well;

4.11.4.f.D.(a)(B) Any proposed changes to the groundwater monitoring system necessary to meet the requirements of a corrective action program; and

4.11.4.f.D.(a)(C) Any proposed changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical procedures used at the facility necessary to meet the requirements of the corrective action program; and

4.11.4.f.D.(b) Within one hundred and eighty (180) days, submit to the chief an engineering feasibility plan for any corrective action program necessary to meet the requirements specified in Section 4.11.5 of these regulations.

4.11.4.g. If the permittee determines, pursuant to Section 4.11.4.f of these regulations, that there is a statistically significant increase of any Phase III monitoring parameter at any monitoring well, he may demonstrate that a source other than the facility caused the increases or that the increases resulted from sampling, analysis, or evaluation. In making this demonstration, the permittee must:

4.11.4.g.A. Notify the chief in writing within seven (7) days of determining a statistically significant increase that he intends to make such a demonstration;

4.11.4.g.B. Within ninety (90) days, submit a report to the chief which demonstrates that a source other than the facility caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation; and

4.11.4.g.C. Continue to monitor in accordance with the Phase III monitoring program.

4.11.5. Whenever a statistically significant increase is found in a Phase II or Phase III monitoring parameter, or when groundwater contamination is otherwise identified by the chief at sites without monitoring programs, which is determined by the chief to have resulted in an adverse effect on an aquifer, and which is attributable to a solid waste facility, the chief may require appropriate corrective or remedial action pursuant to West Virginia Code Chapter 20, Article 5A, and Chapter 20, Article 5F to abate, remediate or correct such pollution. Any such corrective or remedial action order shall take into account any applicable groundwater quality protection standards, the existing use of such waters, the reasonably anticipated uses of such waters, background water quality, and the protection of human health and the environment.

4.12. Reporting.

4.12.1. Daily Logs. Daily logs must be kept by the operator describing the type, amount, and origin of all solid waste received at the solid waste facility. These daily logs must be kept on file at the facility and include:

4.12.1.a. A description of waste handling problems or emergency disposal activities;

4.12.1.b. A record of deviations from the approved design or operational plans; and

4.12.1.c. A record of actions taken to correct violations of the act, other state acts, and the Division's regulations.

4.12.2. Monthly Reports. Monthly solid waste reports describing the type, amount, and origin of waste received at the solid waste facility for the month must be submitted to the chief before the fifteenth day of the following month. The ground and surface water sampling analysis monitoring reporting as required in Section 4.11 of these regulations shall be submitted with the monthly solid waste reports due before the fifteenth day of April, July, October, and January. The monthly report shall also include results of the hazardous waste exclusion efforts as required by Section 4.6.1.a.F of these regulations. A copy of this report shall also be sent to the county or regional solid waste authority for the county or counties in which the solid waste originated. Copies of these reports must be kept on file at the solid waste facility.

4.12.3. Annual Operational Report. An annual solid waste facility operational report is to be submitted for the previous calendar year to the chief before January 31.

4.12.3.a. The report should include:

4.12.3.a.A. Updated list of users of the facility;

4.12.3.a.B. Summary of the daily logs of solid waste received during the previous year;

4.12.3.a.C. Summary of the previous year's surface and groundwater monitoring activities; and

4.12.3.a.D. A brief narrative describing the status of development, construction, maintenance, expansion, and closure of all facilities as part of the approved solid waste facility.

4.12.3.b. The annual solid waste facility operational report for landfills shall also include:

4.12.3.b.A. A topographic map showing the permitted area, location of current working areas and completed areas in relationship to the grid system of the solid waste sequencing plan;

4.12.3.b.B. Cross-sections showing volume of area that has been filled; and

4.12.3.b.C. Computations estimating the remaining useful life of the facility, in months.

4.13. Requirements for Class F Solid Waste Facilities. Except as provided in Sections 4.13 of these regulations, all requirements of these regulations shall be applicable to Class F solid waste facilities. For such facilities in existence on November 4, 1988, the owner or operator of a solid waste facility shall apply for a solid waste permit pursuant to these regulations at such time as an applicant seeks to renew its water pollution control permit issued under W.Va. Code §20-5A, or at such time as requested by the chief. Thereafter, permit renewal applications shall be due 180 days prior to permit expiration.

4.13.1. Waivers and Modifications. During the permit issuance process or upon written request or appropriate notation on the application by the permittee, the chief may waive or modify the requirements of the subsections of Section 3 of these regulations that are listed in Section 4.13.1.a of these regulations and the requirements of the subsections of Section 4 of these regulations that are listed in Section 4.13.1.b of these regulations. Failure of the applicant to supply documentation requested by the chief, which is necessary to justify the requested waiver or modification, shall be grounds for waiver or modification denial. Each request for waiver or modification of a requirement of Section 3 or 4 of these regulations shall be based upon sound engineering judgement taking into consideration the type of waste to be disposed, the type facility, and site characteristics.

4.13.1.a. The following requirements of Section 3 of these regulations which may be waived or modified by the chief: Sections 3.4, 3.7.6.g, 3.7.13, 3.8.3.a.C.(d), 3.8.4.d.A, 3.10.3, 3.13, 3.14, and 3.16.4 of these regulations.

4.13.1.a.A. The requirements of Sections 3.8.4.e, 3.8.9.a.B, 3.9, 3.10.1.a and 3.11.3 of these regulations and the gas monitoring and control provisions of Sections 3.10.1.b, 3.10.1.d, and 3.10.2.c of these regulations may also be waived or modified by the chief for coal combustion by-product facilities.

4.13.1.b. The following requirements of Section 4 of these regulations which may be waived or modified by the chief for coal combustion by-product facilities: Sections 4.4, 4.5.2.c.A.(c), 4.5.3, 4.5.4, 4.5.7.g, 4.5.7.h, 4.5.7.i, 4.5.7.j, 4.6.2.a.B, 4.6.2.a.C, 4.6.2.b.A, 4.6.2.b.B, 4.6.2.b.D, 4.8.3.c.B, 4.10, 4.12, and 4.14.2.c of these regulations.

4.13.2. Requirements for Coal Combustion By-Product Facilities.

4.13.2.a. Liner System Requirements. Liner system requirements for coal combustion by-product landfills, solid waste

disposal surface impoundments and surface impoundments, or portions thereof, placed in operation after May 1, 1990 shall be as follows:

4.13.2.a.A. The liner system for landfills shall consist of eighteen (18) inches of clay, having a permeability no greater than 1×10^{-7} centimeters per second and compacted in six (6) inch lifts to a standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698. A sixty (60) mil synthetic liner shall be installed on top of the compacted clay liner. A leachate collection system consisting of a perforated piping system embedded within an eighteen (18) inch drainage layer, which can consist of bottom ash, having a minimum permeability of 1×10^{-3} centimeters per second shall be installed on top of the synthetic liner. The eighteen (18) inch leachate collection system layer shall serve as the protective cover for the synthetic liner.

4.13.2.a.B. The permittee may elect to construct an alternate liner system for landfills consisting of at least two (2) feet of clay having a permeability no greater than 1×10^{-7} centimeters per second and compacted in six (6) inch lifts to a standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698. Taking into account site-specific conditions, an appropriate groundwater interceptor drainage system, which shall also serve as a leachate detection system, shall be installed under the clay liner in such a manner as to avoid groundwater penetration of the liner system and to facilitate detection of leachate penetrating the liner. An appropriate leachate collection system, which can consist of bottom ash, having a minimum permeability of 1×10^{-3} centimeters per second shall be installed on top of the compacted clay liner provided that this liner system is prohibited for use in major domestic use aquifer areas, major alluvial aquifers, or karst regions.

4.13.2.a.C. Failure of an alternate liner design at the applicant's facility may result in the chief disallowing the use of identical technology in new landfills proposed by the applicant unless the applicant can demonstrate a remedy for the technology's past failure.

4.13.2.a.D. The liner system for solid waste disposal surface impoundments shall be designed and constructed with a leachate detection system imbedded in a filter media having a minimum permeability of 1×10^{-3} centimeters per second topped by eighteen (18) inches of clay having a permeability no greater than 1×10^{-7} centimeters per second and compacted in six (6) inch lifts to a standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698, with a sixty (60) mil synthetic liner installed over the compacted clay.

4.13.2.a.E. For surface impoundments receiving leachate, a permittee may elect use of a liner system consisting of

either eighteen (18) inches of clay having a permeability no greater than 1×10^{-7} centimeters per second and compacted to a standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698, with a sixty (60) mil synthetic liner installed on top of the clay; two (2) feet of clay with the aforementioned permeability rate and compaction density; or any other alternative liner system approved by the chief on a case-by-case basis. Taking into account site-specific conditions, an appropriate groundwater interceptor drainage system, which shall also serve as a leachate detection system, shall be installed under all liner systems in such a manner as to avoid groundwater penetration of the liner system and to facilitate detection of leachate penetrating the liner.

4.13.2.a.F. The provisions of Section 4.8.3.c.B of these regulations do not apply to coal combustion by-product surface impoundments. Surface impoundments associated with a coal combustion by-product facility shall not be subject to any of the groundwater monitoring requirements of these regulations if such impoundments are covered by the overall groundwater monitoring plan for the coal combustion by-product facility.

4.13.2.b. Operating Requirements. Operating requirements for coal combustion by-product landfills and solid waste disposal surface impoundments in operation on or closed prior to May 1, 1990 shall be as follows:

4.13.2.b.A. Operating landfill areas where industrial solid waste has previously been disposed and that where in existence on May 1, 1990 may remain in operation and without liner retrofit unless there is a statistically significant increase in groundwater monitoring parameters as determined by the monitoring provisions of Section 4.11 of these regulations. However, new areas within existing permitted facilities are required to have a liner as specified in Section 4.13.2.a. of this rule. Groundwater remediation may be determined on a case-by-case basis by the chief based upon an evaluation of the information from groundwater monitoring and assessment programs, as provided for in Section 4.11 of these regulations. Upon evidence of such contamination, a corrective action program may be required as described in Section 4.11.5 of these regulations. Such corrective action programs may include closure in accordance with Section 6 of these regulations, retrofit in accordance with Section 4.13.2.a of these regulations, or other appropriate remediation measures.

4.13.2.b.B. For coal combustion by-product landfills in existence on May 1, 1990, the liner provisions of Sections 4.13.2.a.A, and 4.13.2.a.B, of these regulations and the provisions of Section 4.11 of these regulations do not apply to closed or closed portions of such landfills. Monitoring shall not be required for such facilities that are closed prior to May 1,

1990 except for currently-permitted closed facilities or in connection with any remedial or corrective action program ordered by the chief.

4.13.2.b.C. The requirements of these regulations are not applicable to coal combustion by-product disposal surface impoundments in existence on or before May 1, 1990 and which are operating under a permit issued under the provisions of W. Va. Code §20-5A, except that all such impoundments shall be subject to the requirements of Section 4.13.2.b.D and 4.11 of these regulations.

4.13.2.b.D. A coal combustion by-product disposal surface impoundment under Section 4.13.2.b.C shall, upon application and renewal of a permit under the provisions of West Virginia Code Chapter 20, Article 5A, be subject to the following:

4.13.2.b.D.(a) A permit shall be applied for under these regulations, such application and subsequent issuance of such permit to be incorporated in such renewal, all to be known as a "5A/5F permit;"

4.13.2.b.D.(b) Upon application for and issuance of the 5A/5F permit, such an impoundment shall be subject to the requirements of these regulations except Sections 3.1.5, 3.1.6, 3.1.7, 3.2, 3.7.7, 3.7.9, 3.7.10, 3.7.11, 3.7.13.c, 3.7.13.d, 3.7.13.g, 3.7.14, 3.7.16, 3.7.17, 3.8.2, 3.8.5, 3.8.6, 3.8.7, 3.8.9, 3.9, 3.10, 3.11, 3.13, 3.14, 3.16, 4.2, 4.4, 4.5.1, 4.5.2.a, 4.5.3, 4.5.4, 4.5.5, 4.5.7.d, 4.5.7.e, 4.5.7.g, 4.5.7.h, 4.5.7.i, 4.5.7.j, 4.6.1.a.D, 4.6.1.a.H, 4.6.1.a.I, 4.6.1.a.J, 4.6.1.a.K, 4.6.1.a.N, 4.6.1.a.O, 4.6.2, 4.7, 4.8, 4.9, 4.10, 4.12.2, 4.12.3.b, 4.13.3, 5.1, 5.2, 5.3, 5.4, 5.6, 6.1.2, 6.1.3, 6.1.5.a.A, 6.1.5.a.B, 6.1.5.a.C, 6.4.3, 6.4.4, 6.5, 6.6. and 7;

4.13.2.b.D.(c) In addition to the provisions of Section 4.13.1, the following Sections of these regulations may be waived or modified by the chief: 3.7.15, 3.12, 4.5.6, 4.5.7.b, 4.5.7.c, 4.6.1.a.E, 4.6.1.a.G and 4.6.1.a.R.

4.13.2.b.D.(d) Provisions of these regulations other than those specifically addressed in Section 4.13.2.b.D may clearly be not applicable to such an impoundment and may be noted as such on the permit application;

4.13.2.b.D.(e) Recognizing the distinct difference between such a surface impoundment and a dry landfill, the requirements for location of test corings and monitoring wells under the provisions of Sections 3.8.3 and 3.8.4 of these regulations shall be limited to the perimeter of such an impoundment. The chief may further modify the requirements of said Sections 3.8.3 and 3.8.4 regarding the number of such corings and wells and other requirements of said Sections to account for site-

specific factors;

4.13.2.b.D.(f) The requirements of Sections 4.5.2.b, 4.5.2.c and 4.5.6 of these regulations are applicable only to soil borrow areas for such an impoundment;

4.13.2.b.D.(g) The provisions of Section 6.1.1 of these regulations notwithstanding, the chief may order closure of such an impoundment only upon a finding by the chief that there is a failure to undertake remedial or corrective action when the same has been required under Section 4.11.5 of these regulations;

4.13.2.b.D.(h) The provisions of Section 6.1.5.a.D of these regulations notwithstanding, the grade of the final surface of such an impoundment shall be sloped to adequately drain surface runoff; and

4.13.2.b.D.(i) Such an impoundment shall be operated and maintained in accordance with the applicable provisions of West Virginia Code Chapter 20, Article 5D.

4.13.2.b.D.(j) A closure plan for such an impoundment shall be included in the application for the 5A/5F permit if closure is anticipated within five years, or upon request of the chief if closure is ordered pursuant to Section 4.13.2.b.D.(g)

4.13.2.c. Leachate Analysis. The requirements of Section 4.8.4 of these regulations apply to coal combustion by-product landfills and surface impoundments with the exception that the requirements in Section 4.8.4.B of these regulations shall be replaced by the following:

4.13.2.c.A. On a semi-annual basis, the chemical composition of the leachate flowing into a leachate treatment system from a coal combustion by-product facility shall be determined through the analysis of the leachate for some combination of the following parameters: alkalinity, arsenic, barium, hardness, boron, cadmium, calcium, chloride, total and hexavalent chromium, iron, lead, manganese, magnesium, sulfate, total dissolved solids, total organic carbon (TOC), specific conductance, zinc, ammonia nitrogen, biochemical oxygen demand (BOD-5 day), chemical oxygen demand (COD), total phenolic materials, total suspended solids (TSS), aluminum, antimony, beryllium, copper, cyanide, fluoride, mercury, molybdenum, nickel, nitrate, pH, potassium, selenium, silver, sodium, thallium, titanium, phosphorus, vanadium and any other parameter which is specifically known to be associated with the wastes in question and specified by the chief in writing.

4.13.2.c.A.(a) The monitoring parameters listed in Section 4.13.2.c.A of these regulations shall be reported as total

metals unless otherwise specified by the chief.

4.13.3. Requirements for Industrial Solid Waste Facilities Other Than Coal Combustion By-Product Facilities.

4.13.3.a. Liner System Requirements. Liner system requirements for industrial solid waste landfills and solid waste disposal surface impoundments shall be as follows:

4.13.3.a.A. Except as otherwise provided in Section 4.13.3 of these regulations, all provisions of Section 4 of these regulations shall be applicable to industrial solid waste landfills and industrial solid waste disposal surface impoundments constructed after May 1, 1990.

4.13.3.a.A.(a) Any provision of Section 4 of these regulations may be waived or modified by the chief upon written request of the permittee if such provision, in the discretion of the chief, clearly does not apply to the Industrial Solid Waste Facility or where the waiver or modification is consistent with 4.13.1 and is shown to be appropriate for the facility type, type of waste disposed, or site characteristics. Any alternative approved by the chief shall be based upon good engineering judgement.

4.13.3.a.B. For industrial solid waste landfills in existence on May 1, 1990, the liner provisions in Section 4 of these regulations shall not apply to closed or closed portions of such landfills. However, the liner provisions shall apply to any expansion of such facilities. In order to continue to use an active portion of an existing landfill which is unlined after November 5, 1991, the permittee must enter into a compliance schedule requiring such active unlined portions to be closed or retrofitted where appropriate in accordance with these regulations by an agreed date by which all waste must thereafter be placed on an approved liner system, which date shall be no later than thirty (30) months following May 1, 1990.

4.13.3.a.C. Solid waste disposal surface impoundments in operation on May 1, 1990 may continue operation throughout the design life of the impoundment, provided the impoundment shall not be expanded to a size greater than the design approved by the chief in the permit last issued for the facility. Groundwater remediation may be determined on a case-by-case basis by the chief based upon an evaluation of the information developed under the assessment provisions of Section 4.11.5 of these regulations.

4.13.3.b. Appropriate monitoring provisions of Section 4.11 of these regulations shall be incorporated into the permits for industrial solid waste landfills and industrial solid waste disposal surface impoundments in operation on May 1, 1990. No monitoring shall be required for such facilities closed prior to

May 1, 1990 except for closed facilities under permit as of May 1, 1990 or in connection with any remedial or corrective action program ordered by the chief.

4.14. Other Solid Wastes.

4.14.1. General.

4.14.1.a. Except as expressly specified by these regulations, or in an order of the chief or the director, a solid waste facility may receive any solid waste allowed by its permit. Facilities may receive solid waste that requires special handling methods for processing or disposal only with express written approval of the chief or the director, or by specific provisions within the facility permit. If it is not clear that a particular waste is within the authorized wastes that a permitted facility may receive, the permittee shall request and receive a letter of permission from the chief or the director before receiving the waste.

4.14.1.b. Nothing shall limit or affect the power of the chief or the director to prohibit or require special handling requirements he determines are necessary to protect the environment or the health, safety, and welfare of the public.

4.14.1.c. Special wastes such as discarded chemicals and pesticides not regulated as hazardous wastes, properly treated pesticide containers, and contaminated food products and fabrics requiring supervised disposal are examples of special wastes for which approval by the chief or the director would be required before permitted solid waste management facilities could receive and dispose of the products.

4.14.2. Asbestos Wastes. The permittee shall ensure that every individual involved in the management of wastes is protected from exposure in conformance with the provisions of these regulations and other applicable State and federal statutes and regulations.

4.14.2.a. Packaging of Friable Asbestos Materials. All solid wastes that may contain friable asbestos shall be placed in double plastic bags and sealed or encased in two sealed layers of plastic wrap. Each bag or plastic wrap layer must be six (6) mils thick or greater and boldly marked "CAUTION: ASBESTOS FIBERS. AVOID CREATING DUST. BREATHING ASBESTOS DUST MAY CAUSE SERIOUS BODILY HARM" or "CAUTION: CONTAINS ASBESTOS FIBERS. AVOID OPENING OR BREAKING CONTAINER. BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH." Use of sealed cardboard containers or fiber drums may be required for dense waste or as extra protection against breaking of bags. Other special handling or packaging methods may be approved where equal environmental protection may be achieved. Such alternate methods shall only be considered where bagging, wrapping,

or packaging is proven not to be possible.

4.14.2.b. Transportation of Friable Asbestos Materials for Disposal. Properly packaged asbestos wastes should be transported in a closed conveyance with the crew segregated from the load. Asbestos waste must be accompanied by appropriate shipping papers to identify the waste, its origin, and its destination.

4.14.2.c. Disposal of Friable Asbestos Materials. Asbestos waste may be disposed in a special purpose landfill or in a special area of a landfill, and shall meet the following conditions:

4.14.2.c.A. Asbestos waste shall be placed in a lined area located in accordance with the location provisions of section 3.2 of these regulations, and designed and constructed to meet the minimum liner requirements set forth in Section 4.14.2.d of these regulations.

4.14.2.c.B. Asbestos waste shall be hand placed in the trench or cell or by other approved means which insure integrity of bags, wrappings, or containers.

4.14.2.c.C. Asbestos waste shall not be compacted until a sealing layer of soil has been placed over the waste and precautions are taken to prevent the breaking of bags or wrapping. All accidentally broken bags, wraps or containers shall be covered with a minimum of six (6) inches of soil or other prior approved material immediately. Asbestos waste shall be covered with a minimum of six (6) inches of soil or other prior approved material at the end of each working day, or if the facility is in continuous operation at least once every twenty-four hours. A cell which has been completely covered with a minimum of twelve (12) inches of soil or other prior approved material may be compacted. Waste crankcase oil is not acceptable for use as a cover material.

4.14.2.c.D. A final cover of three (3) feet of soil shall be placed over all areas that have not been in use or will not be used for more than thirty (30) days. Areas that will not or have not been used for one (1) year, in addition to final soil cover, shall be graded for erosion prevention and revegetated.

4.14.2.c.E. Any active portion of the asbestos disposal area, or area which has not received final cover and revegetation, plus a fifty-foot wide buffer zone on all sides of the area, shall be fenced so as to deter access by the general public. The chief, upon request, may alter or waive the buffer zone requirements of this Section and may approve other methods that deters access by the general public to the asbestos disposal area.

4.14.2.c.F. The fence or other barrier method approved in Section 4.14.2.c.E shall bear permanent warning signs every three hundred and thirty (330) feet or closer and at every entrance. Such signs shall comply with the signing provisions of 40 CFR Chapter 1, Section 61.156.

4.14.2.c.G. A plat of the area, surveyed and clearly marked as containing asbestos waste shall be provided to the chief or the director upon request and shall be contained and specifically noted in the deed notation as required by Section 6.2.6 of these regulations.

4.14.2.c.H. Asbestos waste shall be buried below the natural ground surface of the site, or at a depth below the final grade of the landfill approved by the chief, in such a manner as to maximize the prevention of wind and water erosion of the asbestos disposal area.

4.14.2.c.I. The fenced area of the asbestos disposal facility shall not be located closer than fifty (50) feet to the property boundary or building or structure.

4.14.2.c.J. The permittee is required to maintain records on nature and quantity of asbestos waste and the source.

4.14.2.d. Asbestos Disposal Area Requirements. Facilities at which asbestos waste is disposed shall meet all of the requirements in Section 4 of these regulations unless an alternative standard from Section 4.14.2.d of these regulations is met or the chief has granted, upon written request, an exemption from a specific requirement of Section 4 of these regulations.

4.14.2.d.A. A liner system for a asbestos waste disposal facility shall consist of the following elements:

4.14.2.d.A.(a) Subbase;

4.14.2.d.A.(b) Compacted soil liner; and

4.14.2.d.A.(c) Leachate collection and protective cover zone.

4.14.2.d.B. The subbase portion of the liner system shall consist of a cleared and grubbed natural ground surface capable of supporting the entire liner system.

4.14.2.d.C. The compacted soil liner shall:

4.14.2.d.C.(a) Be a minimum compacted thickness of two (2) feet;

4.14.2.d.C.(b) Be compacted in six (6) inch lifts;

4.14.2.d.C.(c) Be no more permeable than 1×10^{-6} cm/sec based on laboratory and field testing;

4.14.2.d.C.(d) Be free of particles greater than three (3) inches in any dimension;

4.14.2.d.C.(e) Be placed without damaging the subgrade;

4.14.2.d.C.(f) Be placed during a period of time when both the air temperature and the soil temperature are above freezing so that neither the compacted soil nor the subbase are frozen;

4.14.2.d.C.(g) Have a slope of at least two percent (2%) to facilitate the drainage of leachate across the liner surface; and

4.14.2.d.C.(h) Be designed, operated, and maintained so that the physical and chemical characteristics of the liner and liner's ability to restrict the flow of solid waste, solid waste constituents, or leachate is not adversely affected by the leachate.

4.14.2.d.C.(i) The compacted soil construction liner certification and a Q.A./Q.C. report shall be submitted to the chief prior to the placement of the leachate collection and protective cover zone.

4.14.2.d.D. The leachate collection and protective cover zone shall:

4.14.2.d.D.(a) Create a flow zone between the compacted soil liner and solid waste more permeable than 1×10^{-3} cm/sec based on laboratory and field testing. The leachate collection zone including the piping system must be designed and placed on a minimum slope of two percent (2%) to facilitate efficient leachate drainage and prevent ponding on the composite liner;

4.14.2.d.D.(b) Be at least eighteen (18) inches thick;

4.14.2.d.D.(c) Be constructed of soil or earthen materials to ensure that the hydraulic leachate head on the composite liner does not exceed one (1) foot at the expected flow capacity from the drainage area except during storm events;

4.14.2.d.D.(d) Be comprised of clean soil or earthen materials that contain no debris, plant material, rocks, or other solid material larger than one-quarter (1/4) inch in diameter

and no material with sharp edges;

4.14.2.d.D.(e) Be graded, uniformly compacted, and smoothed;

4.14.2.d.D.(f) Be installed in a manner that prevents damage to the compacted soil liner; and

4.14.2.d.D.(g) Contain a perforated piping system capable of intercepting liquid within the leachate collection zone and conveying the liquid to control collection points. The piping system shall also meet the following:

4.14.2.d.D.(g)(A) The slope sizing and spacing of the piping system shall assure that liquids drain efficiently from the leachate collection zone;

4.14.2.d.D.(g)(B) The distance between pipes in the piping system may not exceed one (100) hundred feet on center;

4.14.2.d.D.(g)(C) The pipes shall be installed perpendicular to the flow;

4.14.2.d.D.(g)(D) The minimum diameter of the perforated pipe shall be four (4) inches with a wall thickness of Schedule 40 or greater;

4.14.2.d.D.(g)(E) The pipe shall be capable of supporting anticipated loads without failure based on facility design;

4.14.2.d.D.(g)(F) Rounded stones or aggregates shall be placed around the pipes of the piping system. The stones or aggregates shall be sized to prevent clogging of the pipes and damage to the composite liner;

4.14.2.d.D.(g)(G) The piping system shall be installed in a fashion that facilitates cleanout, maintenance, and monitoring. Manholes or cleanout risers shall be located along the perimeter of the leachate detection piping system. The number and spacing of the manholes or cleanout risers shall be sufficient to insure proper maintenance of the piping system by water jet flushing or an equivalent method; and

4.14.2.d.D.(g)(H) The leachate collection system shall be cleaned and maintained as necessary.

4.14.2.d.D.(h) The leachate collection zone construction certification and a Q.A./Q.C. report shall be submitted to the chief prior to the placement of solid waste.

4.14.2.d.E. Asbestos may be disposed at an

industrial solid waste facility if all the requirements of Section 4.14.2 of these regulations are met.

4.14.3. Liquids. Free liquids cannot be disposed of in a landfill. Free liquids and poorly-contained liquids shall be absorbed on solid material before being placed in a landfill.

4.14.4. Tires. More than one thousand (1,000) used tires shall not be stored at a facility unless the permit for the facility expressly allows such storage. Tires disposed of in a landfill must be split, cut, or shredded before disposal and must be dispersed in the workface with other solid wastes. Alternate burial not incorporating cutting or splitting at a specific facility may be approved if the method will assure that tires will not emerge.

4.14.5. Drums. Except as provided in Section 4.14.5.a and 4.14.5.b of these regulations, drums and other bulk containers shall not be disposed until emptied and crushed. Pesticide containers must be triple rinsed before disposal.

4.14.5.a. Fiber drums of asbestos which are to be disposed of in designated asbestos disposal areas in accordance with the provisions of Section 4.14.2 of these regulations need not be either emptied or crushed.

4.14.5.b. Drums can be disposed of in a landfill if the drum is full of solid waste which is at least twenty percent (20%) solid by weight, contains no free liquid and is labeled as non-hazardous and identifying the contents.

4.14.6. Bulky Goods. Appliances and other bulky waste goods may be accumulated at a facility for not more than sixty (60) days prior to disposal. An alternate schedule may be approved.

4.14.7. Infectious Waste. Waste which has the appearance of infectious waste, as defined in Section 2.24 of these regulations, shall not be disposed of in an industrial solid waste landfill.

4.14.8. Sewage Sludge.

4.14.8.a. Sewage sludge disposed at a landfill shall contain at least twenty percent (20%) solid by weight. This requirement may be met by adding or blending sand, sawdust, lime, leaves, soil, or other materials that have been approved by the chief prior to disposal. Alternative sludge disposal methods can be utilized upon obtaining written approval from the chief.

4.14.8.b. Sewage sludge may not represent more than twenty-five percent (25%) by weight of the total weight of waste disposed of at the landfill on any working day.

4.14.8.c. The Division may require the landfill operator to periodically sample and analyze incoming sewage sludge.

4.14.9. Shredder Fluff. Shredder fluff shall not be disposed of in any facility unless specifically approved in writing by the chief.

§47-38B-5. Other Solid Waste Facility Performance Standards.

5.1. Requirements for Incinerators.

5.1.1. General Requirements.

5.1.1.a. The incinerator must be located, designed, and operated in accordance with Section 5.1 of these regulations. Appropriate provisions of Section 5.1 may be waived for incinerators constructed prior to November 4, 1988.

5.1.1.b. Waste characterization must be performed in accordance with Section 5.1 of these regulations.

5.1.2. Location Criteria.

5.1.2.a. Unless otherwise approved by the director, no person may establish, construct, operate, maintain, or permit the use of property for any facility:

5.1.2.a.A. Within a 100-year floodplain; or

5.1.2.a.B. Within an area where there is a reasonable probability that the facility will cause:

5.1.2.a.B.(a) An adverse impact upon wetlands;

5.1.2.a.B.(b) An adverse impact upon any endangered or threatened species of animal or plant;

5.1.2.a.B.(c) A statistically significant adverse impact upon any surface water;

5.1.2.a.B.(d) A statistically significant adverse impact upon groundwater quality; or

5.1.2.a.B.(e) The migration and concentration of explosive gases in any facility structures, excluding any leachate collection system or gas control or recovery system components or in the soils or air at or beyond the facility property boundary in excess of twenty-five percent (25%) of the lower explosive limit for such gases of any time.

5.1.3. Operational Requirements.

5.1.3.a. No person may operate or maintain an incinerator except in conformance with the following minimum requirements, unless an exemption is granted by the director in writing:

5.1.3.a.A. The facility must be situated, equipped, operated, and maintained as to minimize interference with other activities in the area;

5.1.3.a.B. Adequate shelter and sanitary facilities must be available for personnel;

5.1.3.a.C. A sign must be prominently posted at the entrance to the incinerator area where the incinerator is part of a larger facility or at the entrance of the facility when the incinerator for all practical purposes comprises the facility. Such sign shall indicate the name, permit number, the hours of operation, necessary safety precautions, and any other pertinent information;

5.1.3.a.D. All incoming solid waste must be confined to the designated storage area and no putrescible waste may be stored for more than twenty-four (24) hours;

5.1.3.a.E. Solid waste must be stored in compliance with Section 4.5.7.j. of these regulations;

5.1.3.a.F. Dust must be controlled in the unloading and charging areas;

5.1.3.a.G. Permanent records must be maintained including the weights of material treated, the quantity of resulting ash and residue, hours of plant operation, combustion temperatures, residence time, and other pertinent information;

5.1.3.a.H. Appropriate fire-fighting equipment must be available in the storage and charging areas and elsewhere as needed;

5.1.3.a.I. Arrangements must be made with local fire protection agency to provide adequate emergency fire-fighting forces;

5.1.3.a.J. Means of communication with emergency facilities must be provided;

5.1.3.a.K. Adequate equipment must be provided to allow cleaning after each day of operation or as may be required in order to maintain the plant in a sanitary condition;

5.1.3.a.L. The charging openings as well as all equipment throughout the plant must be provided with adequate safety equipment;

5.1.3.a.M. The facility must be designed and operated such that it will not cause a nuisance because of the emission of noxious odors, gases, contaminants, or particulate matter or exceed emission limitations established by state management rules;

5.1.3.a.N. Ash and residue resulting from incineration of industrial solid waste must be disposed of at an industrial solid waste landfill facility permitted by the chief to accept the material or be handled by an alternate method approved in writing by the director. Approval will be issued on a case-by-case basis after review of the information contained in reports filed pursuant to Section 5.1 of these regulations. Ash or residue from a facility with a design capacity of five hundred (500) pounds or more per hour shall be placed in a monofill which shall meet the design requirements of 47 CSR 35 only if it has been determined to be a hazardous waste. Non-hazardous industrial solid waste may be placed in a landfill that meets the requirements of these regulations;

5.1.3.a.O. All wastewater from the facility must be discharged into a sanitary sewer, process sewer or other system approved in writing by the director;

5.1.3.a.P. Upon the completion of construction of a new facility, and at least ten (10) days prior to initial operation, the chief must be notified to allow inspection of the facility both prior to and during any performance tests and initial operation;

5.1.3.a.Q. Open burning of solid waste at the facility is prohibited;

5.1.3.a.R. No regulated hazardous waste may be accepted except as permitted under Section 3.16.2. of these regulations;

5.1.3.a.S. An alternative disposal method, approved by the chief in writing, must be used during any time that the facility is inoperable; and

5.1.3.a.T. The incoming waste must be screened to eliminate unacceptable material from entering the facility such as hazardous waste, asbestos, explosive materials, or other materials which may endanger public health and safety.

5.1.4. Waste Characterization.

5.1.4.a. The owner or operator of an incinerator with a design capacity in excess of five hundred (500) pounds per hour must undertake a testing program as follows:

5.1.4.a.A. An ash testing program must be completed

within sixty (60) days of start-up and shake-down of the incinerator. Representative samples of both fly ash and bottom ash must be tested for physical characteristics, bulk chemical composition, analysis using the appropriate leaching test and analysis using the EP toxicity test or other test to determine the wastes' regulatory status under federal or State hazardous waste laws. Test methods, the number of tests, detection limits, and parameters to be tested for will be specified by the chief; and

5.1.4.a.B. A long-term ash testing program must be established. For the first year of operation, quarterly testing of at least one (1) sample of bottom ash and one (1) sample of fly ash must be performed using approved methods and procedures. Thereafter, annual sampling and testing must be performed. The chief may specify an alternate testing program.

5.1.4.b. The owner or operator of a facility with a design capacity of five hundred (500) pounds per hour or less may be required to undertake the testing program described in Section 5.1.4.a of these regulations if the chief determines through an examination of information required in Section 5.1-3.a.T of these regulations that such testing is warranted.

5.2. Requirements for Industrial Transfer Stations.

5.2.1. General.

5.2.1.a. No person may conduct transfer station activities unless the chief has first issued a permit for the activities in accordance with the requirements of these regulations.

5.2.1.b. No person conducting transfer station activities may allow ash, residue, or other waste specified in Section 4.14 of these regulations to be received or handled at a transfer station unless the chief has specifically approved handling that waste in the permit.

5.2.1.c. No person conducting transfer station activities may:

5.2.1.c.A. Mix solid waste with, or store solid waste in such close proximity to other solid waste to create risk of fire or explosion, or a risk to the accumulation of poisonous or otherwise harmful vapors or gases; or

5.2.1.c.B. Allow explosive waste to be processed at the facility.

5.2.1.d. Regulated hazardous waste may not be disposed, processed, or stored where transfer station activities are conducted.

5.2.2. Location Criteria. Transfer stations must be sited in compliance with the location requirements of Sections 3.2.2, 3.2.3, 3.2.5, 3.2.6, 3.2.7, 3.2.8, 3.2.9, and 3.2.10 of these regulations and may not be sited within one hundred feet (100) of a perennial stream.

5.2.3. Access Control.

5.2.3.a. A gate or other barrier shall be maintained at potential vehicular access points to block unauthorized access to the site when an attendant is not on duty.

5.2.3.b. The operator shall construct and maintain a fence or other suitable barrier around the site sufficient to prevent unauthorized access.

5.2.3.c. Access to the site shall be limited to times when an attendant is on duty.

5.2.4. Access Roads. Access roads shall be designed, constructed, and maintained in accordance with Section 4.5.3 of these regulations.

5.2.5. Measuring Waste. Solid waste delivered to a transfer station shall be accurately weighed or otherwise accurately measured prior to unloading in accordance with the provisions of 110 CSR 6A §4.2 and 4.3.

5.2.6. Operations and Equipment.

5.2.6.a. Loading, unloading, storage, compaction and related activities shall be conducted in an enclosed building, unless otherwise approved by the chief.

5.2.6.b. The permittee shall maintain on the site equipment necessary for operation of the facility in accordance with the permit. The equipment shall be maintained in an operable condition.

5.2.6.c. Standby equipment shall be located on the site or at a place where it can be available within twenty-four (24) hours. If a breakdown of the operator's equipment occurs, the operator shall utilize standby equipment as necessary to comply with these regulations.

5.2.6.d. Equipment shall be operated and maintained so as to prevent solid waste from being unintentionally removed from the storage area.

5.2.6.e. Equipment used to handle putrescible solid waste shall be cleaned at the end of each working day.

5.2.7. Unloading Area.

5.2.7.a. The approach and unloading area shall be adequate in size and design to facilitate the rapid unloading of solid waste from the collection vehicles and the unobstructed maneuvering of the vehicles and other equipment.

5.2.7.b. The loading areas and unloading areas shall be constructed of impervious material which is capable of being cleaned by high pressure water spray and shall be equipped with drains or sumps connected to a sanitary sewer system or treatment facility to facilitate the removal of water.

5.2.7.c. If the facility has an unloading pit, the facility shall have in place truck wheel curbs and tie downs that are sufficient to prevent trucks from backing into the pit or falling into the pit while unloading.

5.2.7.d. An attendant or clearly marked signs shall direct vehicles to the unloading area.

5.2.7.e. The permittee shall ensure that collection vehicles unload waste promptly in unloading areas.

5.2.7.f. Solid waste shall be confined to the unloading area and the approved storage areas.

5.2.8. Cleaning and Maintenance.

5.2.8.a. Areas within the building shall be kept clean.

5.2.8.b. The operator may not allow putrescible waste to remain at the transfer station at the end of the day or for more than twenty-four (24) hours.

5.2.8.c. Plumbing shall be properly maintained, and the floors shall be well drained.

5.2.8.d. Macerators, hammer mills, and grinders shall be cleanable and shall be equipped with drains that connect to a sanitary sewer system or treatment facility.

5.2.8.e. Provision shall be made for the routine operational maintenance of the facility.

5.2.9. Water Quality Protection. All permit holders must meet the requirements of 46 CSR.1.

5.2.10. Other Requirements.

5.2.10.a. The operator shall also prevent and eliminate conditions not otherwise prohibited by these regulations that are

harmful to the environment or public health, or which create safety hazards, odors, dust, noise, unsightliness, and other public nuisances.

5.2.10.b. No person may cause or allow open burning.

5.2.10.c. The operator shall prevent the attraction, harborage or breeding of vectors.

5.2.10.d. Salvaging of materials may not be conducted unless salvaging is controlled by the operator to prevent interference with prompt and sanitary operations and is conducted to prevent a health hazard or nuisance.

5.2.10.e. Salvaged materials shall be promptly removed from the unloading area and either stored in an approved area or transported off site.

5.2.10.f. The operator may not allow litter to be blown or otherwise deposited off site.

5.2.10.g. Fences or other barriers sufficient to control blowing litter shall be located in the area immediately downwind from the unloading area, unless transfer activities are conducted within an enclosed building or the solid waste being transferred cannot create blowing litter.

5.2.10.h. Litter shall be collected at least weekly from fences, roadways, tree line barriers, and other barriers and disposed or stored in accordance with the act and the regulations thereunder, unless a greater frequency is set forth in the permit.

5.2.10.i. A facility subject to these regulations shall be designed, constructed, maintained, and operated to prevent and minimize the potential for fire, explosion, or release of solid waste constituents to the air, water, or soil of this state that could threaten public health or safety, public welfare, or the environment.

5.2.10.j. The operator of a transfer station shall meet all of the reporting requirements as specified in Section 4.12 of these regulations.

5.2.10.k. The facility shall be surrounded with rapidly growing trees, shrubbery, fencing, berms, or other appropriate means to screen it from the surrounding area.

5.2.10.l. Only industrial waste and commercial industrial waste shall be accepted at the facility. A facility may accept infectious waste that has been rendered noninfectious, construction and demolition debris and industrial waste provided these types of waste are kept segregated from each other until

placed in the appropriate landfill. No hazardous waste regulated under 47 CSR 35 shall be accepted unless specifically approved by the chief.

5.2.10.m. All solid waste passing through the transfer station must be ultimately treated or disposed of at a facility authorized by the Division if in this State, or by the appropriate governmental agency or agencies if in other states, territories, or nations.

5.2.10.n. A transfer station with operating mechanical equipment must have an attendant on duty at all times the facility is open. Suitable fencing, gates, or signs must be provided.

5.2.10.o. All floors must be drained and free from standing water. All drainage from cleaning areas must be discharged to sanitary sewers or the equivalent.

5.2.10.p. Adequate storage space for incoming solid waste must be available at the transfer station.

5.2.10.q. All solid waste must be removed from the transfer station facility whenever transfer containers are full, or weekly, whichever comes first.

5.3. Requirements for Recycling Facilities. (Reserved).

5.4. Construction/Demolition Waste - Such waste generated by industrial facilities may be placed in permitted Class F and/or G landfills if provided for in the landfills permit.

5.5. Requirements For Beneficial Use Of Coal Combustion By-Products.

5.5.1. The following uses of coal combustion by-products are deemed to be beneficial and do not require a permit under these regulations so long as such uses are consistent with the requirements of this Section: Provided, That, for purposes of this Section, the term "coal combustion by-products" as defined in Section 2.13 of these regulations shall be limited to residues normally associated with the burning or controlling of emissions of fossil fuels and shall not include residues from the burning of solid waste:

5.5.1.a. Coal combustion by-products used as a material in manufacturing another product (e.g., concrete, flowable fill, lightweight aggregate, concrete block, roofing materials, plastics, paint) or as a substitute for a product or natural resource (e.g., blasting grit, filter cloth precoat for sludge dewatering);

5.5.1.b. Coal combustion by-products used for the extraction or recovery of materials and compounds contained within

the coal combustion by-products;

5.5.1.c. Coal combustion by-products used as a stabilization/solidification agent for other wastes. This use of coal combustion by-products shall be considered a beneficial use for the purposes of Section 5.5.1. of these regulations if the coal combustion by-product is used singly or in combination with other additives or agents to stabilize or solidify another waste product and if:

5.5.1.c.A. The person or entity proposing the use has first given advance written notice to the chief; and

5.5.1.c.B. The use results in altered physical or chemical characteristics of the other waste and a reduction of the potential for the resulting stabilized mixture to leach constituents into the environment;

5.5.1.d. Coal combustion by-products used under the authority of the West Virginia Division of Energy;

5.5.1.e. Coal combustion by-products used as pipe bedding or as a composite liner drainage layer;

5.5.1.f. Coal combustion by-products used as a daily or intermediate cover for Class A, Class B, or Class C solid waste facilities if the specific permit allows for such use;

5.5.1.g. Coal combustion bottom ash or boiler slag used as a anti-skid material if such use is consistent with Division of Highways specifications. The use of fly ash as an anti-skid material is not deemed to be a beneficial use; and

5.5.1.h. Coal combustion by-products used as a construction material (e.g., subbases, bases) for roads or parking lots that have asphalt or concrete wearing surfaces if approved by the West Virginia Division of Highways or the project owner.

5.5.1.i. Coal combustion fly ash used as a soil amendment subject to the chiefs approval on a case-by-case basis, such approval not to be unduly withheld.

5.5.1.j. Coal combustion bottom ash or boiler slag produced at a facility permitted under West Virginia Code Chapter 20, Article 5A and used as a structural fill material or soil amendment.

5.5.1.k. Coal combustion fly ash used in structural fills for highway construction and maintenance activities and other transportation-related activities approved by and performed in accordance with standards of the West Virginia Department of Transportation or divisions thereof. Such use shall also be

subject to the provisions of Sections 5.5.1.m.D. and 5.5.1.m.E. unless otherwise approved by the chief.

5.5.1.1. Coal combustion fly ash used as structural fill (project) in activities other than those specified in Section 5.5.1.k., in single project quantities of up to 500 tons, provided that:

5.5.1.1.A. At least forty eight (48) hours prior to such use, the person proposing the same provides the chief with (i) the person's name, address, phone number, company affiliation (if any) and title (if any), (ii) a description of the nature, purpose and location of the project (including latitude and longitude crossing at or near the center of the project area), (iii) the estimated beginning and ending dates for the project, (iv) the estimated volume of the fly ash to be used for the project and (v) a witnessed statement signed by the owner of the property upon which the structural fill is to be located acknowledging and consenting to the use of fly ash therein;

5.5.1.1.B. The project meets the requirements of Sections 5.5.1.m.D. and 5.5.1.m.E., provided that the chief may waive any of the location criteria listed in Section 5.5.1.m.E. if it is demonstrated to the chief that the project is properly designed to insure protection of surface water and groundwater;

5.5.1.1.C. The project is not precluded by action of the chief in limiting the number of projects in a given area;

5.5.1.1.D. If, upon receipt of the information required under Section 5.5.1.1., the chief is concerned that there appears to be a demonstrated high probability that any of the applicable provisions of Section 5.5.1. are not being complied with, the chief shall immediately relay such concerns by telephone or facsimile to the person proposing the project. The chief may delay commencement of the project for an additional period not to exceed forty eight (48) hours beyond the initial notice period provided in Section 5.5.1.1.A. in order that the person proposing the project may communicate to the chief such actions as are necessary to satisfy such concerns; and

5.5.1.1.E. Any project commenced under Section 5.5.1.1. shall be subject to such corrective actions as prescribed by the chief if the chief determines that any applicable provisions of Section 5.5.1. are being violated.

5.5.1.m. Coal combustion fly ash used as structural fill in activities other than those specified in Section 5.5.1.k., in single project quantities of more than 500 tons and not more than 50,000 tons, provided the following conditions are met:

5.5.1.m.A. At least fifteen (15) days before placing

the material in a structural fill (project), the person proposing such use shall submit a written notice to the Chief. The notice shall contain the following information, at a minimum:

5.5.1.m.A.(a) The name, address, phone number, company affiliation (if any) and title (if any) of the person proposing such use;

5.5.1.m.A.(b) A description of the nature, purpose and location of the project, including a topographic map showing the site boundaries of the proposed fill and dwellings within five hundred (500) feet thereof, and a United States Department of Agriculture Soils Classification map of the area, if available;

5.5.1.m.A.(c) The estimated beginning and ending dates for the project;

5.5.1.m.A.(d) The estimated volume and the name of the facility generating the fly ash to be used for the project;

5.5.1.m.A.(e) The most recent physical and chemical analyses of the fly ash, including a leachability analysis that is consistent with Section 3.8.8. of these regulations; and

5.5.1.m.A.(f) A witnessed statement signed by the owner of the property upon which the structural fill is to be located acknowledging and consenting to the use of fly ash therein.

5.5.1.m.B. At the time of the initial notice to the chief under Section 5.5.1.m.A., the person proposing such use shall submit to the chief construction plans for the project. Such construction plans shall include specific provisions for a subbase that, at a minimum, shall consist of (i) clearing and grubbing of boulders and woody growth within the entire structural fill area, and (ii) compaction or amendment of the in-situ soils in order to achieve a maximum permeability of 10^{-5} cm/sec. unless otherwise approved by the chief. Immediately above the subbase, a drainage layer shall be installed which is capable of preventing fluid buildup within the structural fill. For projects exceeding 30,000 tons, the construction plans shall be prepared by a registered professional engineer in accordance with sound engineering practices and shall be signed and sealed by said engineer.

5.5.1.m.C. Concurrent with the notice provided to the chief under Section 5.5.1.m.A., the person proposing such use shall provide adequate notice to the public by posting a sign at the construction site with letters clearly visible acknowledging the intent to use fly ash in a structural fill. The posted sign shall contain, at a minimum:

5.5.1.m.C.(a) The name and address of the person proposing such use;

5.5.1.m.C.(b) A brief description of the project, including the projected beneficial end use;

5.5.1.m.C.(c) The name, address and telephone number of a person from whom interested persons may obtain further information on the project; and

5.5.1.m.C.(d) Information regarding the right of any person to file comments regarding the project with the chief within ten (10) days following posting of the sign.

5.5.1.m.D. The use of fly ash in a structural fill under Section 5.5.1.m. may not be considered unless all of the following requirements are met:

5.5.1.m.D.(a) The pH of the fly ash is at least 6.0 standard units: Provided, That fly ash with a pH of lower than 6.0 standard units may be utilized if, in the notice provided under Section 5.5.1.m.A., the person proposing such use demonstrates one or more of the following:

5.5.1.m.D.(a)(A) The presence of enhanced site specific soil attenuation capabilities including but not limited to high pH in-situ soils, adequate soil cation exchange capacity, low in-situ soil permeabilities, soil layers (greater than five (5) feet thick at permeabilities of 10^{-6} cm/sec. or less);

5.5.1.m.D.(a)(B) The employment of alternative construction techniques including but not limited to placing of a clay cap, covering with asphalt or concrete, base preparation with lime or limestone, soil/fly ash layering, etc.;

5.5.1.m.D.(a)(C) The fly ash is stabilized with lime or cement or other suitable fixation material;

5.5.1.m.D.(a)(D) The fly ash is capable of self-attenuation within the ash or within the fill;

5.5.1.m.D.(b) The slope of the structural fill is not greater than 2.5 horizontal to 1.0 vertical, unless otherwise approved by the chief;

5.5.1.m.D.(c) The fly ash is spread uniformly and compacted in lifts not exceeding one (1) foot;

5.5.1.m.D.(d) Erosion and sediment control measures consistent with standards specified in the United States Soil Conservation Service publication entitled "Erosion and Sediment

Control Handbook for Developing Areas (West Virginia)" are utilized: Provided, That, for projects exceeding 30,000 tons, the chief may require such additional or different measures consistent with Section 4.5.2.c. of these regulations as he deems necessary for proper erosion and sedimentation control;

5.5.1.m.D.(e) Surface runoff from the structural fill area is minimized during filling and construction activities;

5.5.1.m.D.(f) Adequate surface and under drainage are provided to prevent build up of water within the structural fill; and

5.5.1.m.D.(g) The structural fill is subsequently paved or otherwise sealed or covered within sixty (60) days of final placement of the fly ash, unless otherwise approved by the chief, to minimize infiltration of precipitation.

5.5.1.m.E. Structural fills under Section 5.5.1.m. may not be located:

5.5.1.m.E.(a) Within three hundred (300) feet of an intermittent or perennial stream unless the stream is protected by properly engineered diversion ditches, culverts or other structures;

5.5.1.m.E.(b) Within twelve hundred (1200) feet upgradient and three hundred (300) feet downgradient of a private or public groundwater supply in existence at the commencement of the project;

5.5.1.m.E.(c) Within five hundred (500) feet upgradient of the intake of a public surface water supply in existence at the commencement of the project;

5.5.1.m.E.(d) Within four (4) feet of underlying bedrock;

5.5.1.m.E.(e) Within twenty-five (25) feet of any bedrock outcrop, unless the outcrop is properly treated to minimize infiltration into any fractured zones;

5.5.1.m.E.(f) Within three hundred (300) feet of a sinkhole or area draining into a sinkhole;

5.5.1.m.E.(g) Within the one hundred (100) year flood plain;

5.5.1.m.E.(h) Within any area of immaturely to maturely developed karst terrain;

5.5.1.m.E.(i) Within three hundred (300) feet of a

wetland; or

5.5.1.m.E.(j) Within four (4) feet of the seasonal high water table.

5.5.1.m.F. The chief may waive any of the location criteria listed in Section 5.5.1.m.E. if it is demonstrated to the chief that the project is properly designed to insure protection of surface water and groundwater.

5.5.1.m.G. Following receipt of the written notice under Section 5.5.1.m.A., the chief may require the person proposing such use to submit such additional information as he deems necessary.

5.5.1.m.H. Following receipt of the written notice under Section 5.5.1.m.A., any public comments filed under Section 5.5.1.m.C.(d), any additional information required under Section 5.5.1.m.G., and within fifteen (15) days of receipt of said written notice, the chief may delay the project if he determines that there is a demonstrated high probability that any of the applicable provisions of Section 5.5.1. are not being complied with. Written notice of such delay shall immediately be communicated to the person proposing the project and shall set forth such additional actions as the chief determines as necessary to bring the project into compliance. The person proposing such use may then proceed with the project if such compliance actions are taken. If the chief, by the fifteenth (15th) day set forth above, fails to provide such notice, the person proposing such use may proceed with the project as initially proposed. If such additional actions are set forth, the person proposing such use shall inform the chief in writing of compliance actions taken.

5.5.1.m.I. The provisions of Section 5.5.1.m.H. notwithstanding, any project commenced under said Section 5.5.1.m.H., and for which no notice was received from the chief by the fifteenth (15th) day, shall nonetheless be subject to such corrective actions as prescribed by the chief if the chief determines that any applicable provisions of Section 5.5.1. are being violated.

5.5.1.m.J. The number of projects in a given area may be limited by the chief.

5.5.1.n. Coal combustion fly ash used as structural fill in activities other than those specified in Section 5.5.1.k., in single project quantities of more than 50,000 tons but less than 100,000 tons, provided that the following conditions are met by the person proposing such use (applicant):

5.5.1.n.A. All of the requirements of Section 5.5.1.m. are complied with, in addition to the following:

5.5.1.n.A.(a) The minimum period for submitting notice to the chief under Section 5.5.1.m.A. shall be twenty one (21) days instead of fifteen (15) days;

5.5.1.n.A.(b) At the time of the initial notice to the chief under Section 5.5.1.m.A., and in addition to posting the sign under Section 5.5.1.m.C., the applicant shall publish a Class I legal advertisement in a newspaper of general circulation in the county or counties in which the structural fill will be constructed. In addition to the requirements of Sections 5.5.1.m.C.(a) through 5.5.1.m.C.(d), the applicant shall provide in the Class I legal advertisement a clear and accurate location map with (i) a scale and detail at least equal to that of the West Virginia official highway map, (ii) a size of a minimum of two inches by two inches (2" x 2"), (iii) latitude and longitude lines which cross at or near the center of the project area, and (iv) a north arrow; and

5.5.1.n.A.(c) The project may not commence unless and until a certificate of approval is issued by the chief. Following receipt of the notice required in Section 5.5.1.m.A. (as modified by Section 5.5.1.n.A.(a)), receipt of any additional information required under Section 5.5.1.m.G., receipt of public comments under Section 5.5.1.m.C. (as modified by Section 5.5.1.n.A.(b)) and within twenty one (21) days of receipt of said notice, the chief shall act expeditiously to grant or deny the certificate, or grant the certificate subject to such additional actions as the chief may determine as necessary to bring the project into compliance with these regulations. If the certificate is not granted (subject or not subject to any such additional actions) or denied within twenty one (21) days of receipt of the notice by the chief, the certificate shall be deemed to be granted. If such additional actions are set forth, the applicant shall inform the chief in writing of compliance actions taken.

5.5.1.o. Coal combustion fly ash used as structural fill in activities other than those specified in Section 5.5.1.k., in single project quantities of 100,000 tons or more is subject to the requirements of Section 3.7. of these regulations. The chief may waive any of the requirements of said Section 3.7. on a case-by-case basis.

5.5.1.p. The beneficial use of coal combustion fly ash as structural fill as provided in Sections 5.5.1.l., 5.5.1.m. and 5.5.1.n. shall be deemed to have a permit-by-rule provided that the project is in compliance with the applicable public notice and environmental performance standards contained in such Sections and Section 4.11.5. The permit-by-rule and activities permitted thereunder shall not be subject to the provisions of West Virginia Code Chapter 20, Article 5F or regulations promulgated thereunder except to the extent such provisions and regulations are incorporated into the standards set forth above.

5.6. Requirements for Uncommon or Miscellaneous Facilities.

5.6.1. Green Boxes, Bins, and Dumpsters.

5.6.1.a. Each person who causes to be placed a dumpster at a location for purposes of collecting, on a commercial basis, solid waste, at a place other than an approved solid waste facility, shall register such dumpsters with the chief on the date such dumpster is to be placed in operation. The registration shall identify the location, number of containers, size of containers, owner of the containers and any other information as required by the chief. Any changes in or additions to the information filed with the chief shall be noted in an updated registration to be filed by the person responsible for the dumpster within 30 days of the change. This registration requirement shall not apply to privately owned bins and dumpsters maintained on the property of the solid waste generator. Such privately placed collection units shall be subject only to the provisions of Section 5.6.1.b. of these regulations. For new or existing dumpsters, greenboxes, bins and other containers placed for commercial collection as of July 1, 1992, registration shall be filed with the chief by no later than October 1, 1992.

5.6.1.b. Each person who causes to be placed a dumpster or other solid waste collection container shall be responsible for maintenance, litter, a

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control at the site of the dumpster or container.

§47-38B-6. Closure and Bond Release.

6.1. Permanent Closure.

6.1.1. Applicability. Any person who maintains or operates a solid waste facility must, when the fill area or portion thereof reaches final grade or when the chief determines that closure is required, cease to accept waste and close the facility or portion thereof in accordance with the plan approval issued by the chief and the provisions of Section 6.1 of these regulations unless otherwise approved by the chief in writing.

6.1.1.a. Upon request of the permittee, or upon his own initiative, the chief may waive or modify any of the closure requirements of Section 6 of these regulations or allow alternative permit conditions or practices as appropriate based upon the type of wastes disposed, type of facility, site characteristics, and sound engineering judgement.

6.1.2. Notification Procedures.

6.1.2.a. At least one hundred and twenty (120) days prior to closing the facility, the permittee shall notify the chief in writing of the intent to close the facility and the expected date of closure. Prior to this date, the permittee shall notify all users of the facility of the intent to close the facility so that alternative disposal options can be arranged.

6.1.2.b. For Class G Commercial Industrial Solid Waste Facilities signs shall be posted at all points of access to the facility at least thirty (30) days prior to closure indicating the date of closure and alternative disposal facilities.

6.1.3. Restricted Access. Within ten (10) days after ceasing to accept waste, the permittee shall restrict access by the use of gates, fencing, or other appropriate means to insure against further use of the facility. If the final use allows access, such access must be restricted until closure has been completed and approved by the chief.

6.1.4. Deed Notation.

6.1.4.a. Upon closure of a solid waste disposal area, the owner or operator must record a deed notation with the county clerk's office that shall be available with the deed of the property that will notify any potential purchaser that:

6.1.4.a.A. The land has been used as an industrial

solid waste landfill, industrial solid waste surface disposal impoundment; and

6.1.4.a.B. Its use is restricted to ensure postclosure care including any use that would interfere with maintaining the integrity and effectiveness of the final cover and maintaining the system to control the formation and release of leachate and explosive gases into the environment.

6.1.4.b. The deed shall include at a minimum:

6.1.4.b.A. Survey plot indicating the location and dimension of the landfill;

6.1.4.b.B. A record of waste, including type, location, and quantity of waste disposed of at the site; and

6.1.4.b.C. Disposal location of asbestos and any other waste specified by the chief.

6.1.4.c. A certification of deed notation must be filed with the chief within ninety (90) days of closure.

6.1.5. Closure.

6.1.5.a. Unless otherwise approved by the chief in writing, the closure plan shall include the following:

6.1.5.a.A. The permittee shall provide final cover and grading in the following manner:

6.1.5.a.A.(a) A one (1) foot layer of a material with a high hydraulic conductivity shall be placed directly on the refuse mass to facilitate landfill gas control;

6.1.5.a.A.(b) A cap consisting of a uniform and compacted one (1) foot layer of clay that is no more permeable than 1×10^{-7} cm/s shall be placed and graded over the entire surface of each final lift in six (6) inch lifts. The chief may, in the issued permit, approve the use of a synthetic material in lieu of the layer of clay;

6.1.5.a.A.(c) A one (1) foot drainage layer that is more permeable than 1×10^{-3} cm/s and capable of transmitting flow and preventing erosion shall be placed over the cap; and

6.1.5.a.A.(d) A uniform and compacted layer of soil that is at least two (2) feet in thickness and capable of supporting vegetation shall be placed over the drainage layer.

6.1.5.a.B. The operator shall place final cover within

one (1) year after disposal in the final lift ceases or as soon thereafter as weather permits, unless he obtains written approval from the chief allowing a later period based on a demonstration that a later period is necessary to protect the cap and drainage layer from differential settlement of waste at the facility. The chief will not allow a later period unless, at a minimum, delayed installation will not cause or allow any violations of any provision of these regulations.

6.1.5.a.C. Surface water run-on must be diverted around all areas used for waste disposal to limit the potential for erosion of the cover soils and increased infiltration. Drainage swales conveying surface water runoff over previous waste disposal areas must be lined with a minimum thickness of two (2) feet of material acceptable to the chief.

6.1.5.a.D. The grade of the final surface of the facility shall not be less than three percent (3%) nor more than twenty-five percent (25%) unless otherwise approved by the chief as a part of the issued permit. Long slopes shall incorporate runoff control measures and terracing in order to minimize erosion. For sites having a natural slope greater than twenty-five percent (25%), a slope up to thirty-three percent (33%) may be considered acceptable if terracing is incorporated at least every twenty (20) feet of vertical distance with runoff control.

6.1.5.a.E. Within ninety (90) days after the placement of final cover, the permittee shall complete seeding, fertilizing, and mulching of the finished surface. The seed type and amount of fertilizer applied shall be selected depending on the type and quality of topsoil and compatibility with both native vegetation and the final use. Unless otherwise approved by the chief in writing, seed mixture and application rates must be in accordance with Section 4.5.6 of these regulations.

6.1.5.a.F. Additional information may be required at the discretion of the chief.

6.1.5.b. Closure plan for solid waste facilities other than landfills shall include the requirements of Sections 6.1.5.a.D and 6.1.5.a.E of these regulations and any other requirement specified by the chief.

6.1.6. Final Use at Landfills. The following activities are prohibited at closed landfills unless specifically approved by the director in writing:

6.1.6.a. Use of the facility for agricultural purposes;

6.1.6.b. Establishment or construction of any buildings;
or

6.1.6.c. Excavation of the final cover or any waste materials.

6.1.7. Certification by Registered Professional Engineer. All closure activities must be inspected and approved by a registered professional engineer prior to application to the chief.

6.1.8. Closure Approval. Upon completion of requirements related to closure, the director will issue a final closure approval. The date of the director's final closure approval shall be the date of commencement of the post-closure bond liability period.

6.2. Inactive Status. Upon application to the director, a permittee may request inactive status for a period not to exceed six (6) months. To qualify for inactive status, the permittee shall:

6.2.1. Intermediate Cover. Demonstrate that all solid wastes are covered by at least one (1) foot of intermediate cover.

6.2.2. Final Cover. Demonstrate that all areas where solid waste disposal is complete have been covered with final cover as described in Section 6.1.5.a.A of these regulations.

6.2.3. Revegetation. Demonstrate that all disturbed areas have been seeded in accordance with the revegetation plans specified by Section 4.5.6 of these regulations.

6.2.4. Restricted Access. Restrict access to the area.

6.2.5. Maintenance of Leachate Control. Demonstrate that leachate collection and treatment will be maintained.

6.2.6. Deed Notation. Demonstrate that notations have been made in permanent deed records in the County Clerk's Office that the site has been used as a solid waste landfill.

6.2.7. Other Assurances. Provide any other assurance specified by the director.

6.3. Post-Closure Care. Post-closure care shall continue for up to thirty (30) years after final closure of areas unless otherwise extended by the director and shall consist of the following:

6.3.1. Monitoring. Monitoring shall continue as specified in the monitoring plan required by the permit.

6.3.2. Repair of Settlement. Any settling of solid waste which occurs up to thirty (30) years of the date of final closure, causing ponding of waters in areas of solid waste deposits, shall

be repaired promptly. Such repairs shall include any necessary regrading, additions of fill material, and revegetation of settled areas.

6.3.3. Repair of Cover Material. Any cracking or erosion of cover material which occurs and may cause waters to enter solid waste deposits shall be repaired immediately. Such repairs shall include any necessary regrading, additions of cover material, and revegetation to eliminate such cracks or eroded areas.

6.3.4. Site Monitoring. Further disposal of solid waste at a closed solid waste facility is prohibited. The closed solid waste facility shall be monitored by the permittee, at a minimum frequency of once each month during the post-closure period, to assure that solid waste deposits and vandalism do not occur at the closed solid waste facility. Any solid waste deposited at the closed solid waste facility during the post-closure period shall be promptly removed and disposed at an approved solid waste facility. Evidence of disease vectors shall be treated promptly.

6.4. Final Post-Closure Inspection.

6.4.1. If the permittee of a solid waste facility believes that post-closure requirements have been met, the permittee may file a request for a final post-closure inspection with the director.

6.4.2. Upon a request for a final post-closure inspection, the director will inspect the facility to verify that final post-closure has been completed as follows:

6.4.2.a. The applicable operating requirements of the Solid Waste Management Act and all other environmental laws of the State of West Virginia, the regulations of the West Virginia Division of Environmental Protection, terms and conditions of the permit, the approved closure plan, and orders issued by the chief or the director have been complied with.

6.4.2.b. No further remedial action, maintenance, or other activity by the permittee is necessary to continue compliance with the Solid Waste Management Act, the regulations promulgated thereunder, orders issued by the chief or the director, and the terms and conditions of the permit and the approved closure plan.

6.4.2.c. The facility is not causing adverse effects on the environment, and is not causing a nuisance.

6.4.3. Upon a finding by the director that the facility is in compliance with all factors listed in Section 6.4 of these regulations, the permittee will be eligible for bond release pursuant to Section 6.6 of these regulations.

6.4.4. Upon a finding by the director that the facility is not in compliance with all the factors listed in Section 6.4 of these regulations, the director shall initiate proceedings for bond forfeiture pursuant to Section 6.5 of these regulations.

6.5. Bond Forfeiture.

6.5.1. Procedure. If the director declares a bond forfeit, he shall:

6.5.1.a. Send written notification -- to the principal, to the bond surety, and to every county or regional solid waste authority in the area that utilizes the facility -- of his determination to declare the bond forfeit and the reasons for the forfeiture;

6.5.1.b. Advise the principal and surety of the right to appeal to circuit court; and

6.5.1.c. Proceed to collect on the bond as provided by applicable laws for the collection of defaulted bonds or other debts.

6.5.2. Collateral Bond. If the director declares a collateral bond forfeited, he shall pay, or direct the State treasurer to pay, the collateral funds into an appropriate Solid Waste Fund. If upon proper demand and presentation, the banking institution or other person or municipality which issued the collateral refuses to pay the Division the proceeds of a collateral undertaking such as a certificate of deposit, letter of credit or government negotiable bond, the director shall take appropriate steps to collect the proceeds.

6.5.3. Surety Bond. If the director declares a surety bond forfeited, he shall certify the same to the Office of Attorney General which will proceed to enforce and collect the amount forfeited, which will, upon collection, be paid into an appropriate Solid Waste Fund.

6.5.4. Use of Funds. Monies received from the forfeiture of bonds, and interest accrued, will be used first to accomplish final closure of, and to take steps necessary and proper to remedy and prevent adverse environmental effects from, the solid waste facilities upon which liability was charged on the bonds. Any monies remaining after such final closure and all necessary remedial actions have been accomplished shall be deposited in the Solid Waste Enforcement Fund that was established pursuant to W. Va. Code §20-5F-5a(h)(1).

6.6. Release Of Bonds.

6.6.1. Request. An operator seeking a release of a bond

previously submitted to the director must file a written request with the director for release of the bond amount after inspection or after posting a replacement bond in accordance with the provisions of Section 3.13 of these regulations.

6.6.2. Application. The application for bond release must contain the following:

6.6.2.a. The name of the permittee and identification of the facility for which bond release is sought;

6.6.2.b. The total amount of bond in effect for the facility; and

6.6.2.c. Other information that may be required by the director.

6.6.2.d. The release or forfeiture of a bond by the director does not constitute a waiver or release of other liability provided in law, nor does it abridge or alter rights of action or remedies of a person or municipality now or hereafter existing in equity or under common law or statutory law, both criminal and civil.

6.6.2.e. The director may grant bond releases immediately upon final closure, for facilities other than landfills, if it is clearly demonstrated that further monitoring, restoration, or maintenance is not necessary to protect the public health, safety and welfare, and the environment.

6.7. Preservation of Remedies. Remedies provided or authorized by law for a violation of applicable federal or State statutes, the regulations promulgated thereunder, orders issued by the chief or the director, or the terms and conditions of permits are expressly preserved. Nothing in these regulations is an exclusive penalty or remedy for such a violation. No action taken under these regulations waives or impairs another remedy or penalty provided in law or equity.

§47-38B-7. Open Dumps.

7.1. Prohibitions.

7.1.1. No person may create or operate an open dump.

7.1.2. No person may contribute additional solid waste to an open dump after April 1, 1988.

7.1.3. Except as provided in Sections 7.1.4 and 7.1.5 of these regulations, no landowner may allow an open dump to exist on his property unless such open dump is under a compliance schedule approved by the chief.

7.1.4. An open dump operated prior to April 1, 1988 by a landowner or tenant for the disposal of solid waste generated by the landowner or tenant at his residence or farm is not deemed to constitute a violation of Section 7.1.3 of these regulations if such open dump did not constitute a violation of law on January 1, 1988.

7.1.4.a. After April 1, 1988, no additional solid waste may be contributed to an open dump operated by a landowner or tenant for the disposal of solid waste generated by the landowner or tenant at his residence or farm.

7.1.4.b. The landowner or tenant who operated an open dump for the disposal of solid waste generated at his residence or farm must, at a minimum, cover the accumulated waste with two (2) feet of topsoil.

7.1.5. An unauthorized dump created by unknown persons is not deemed to constitute a violation of Section 7.1.3 of these regulations and the owner of the land on which such dump is located is not liable for unauthorized dumping unless he refuses to cooperate with the Division in stopping the dumping. Cooperation with Division may include, but is not limited to, the following:

7.1.5.a. The posting of signs stating that dumping is illegal;

7.1.5.b. The erection of fencing to surround the accumulated waste;

7.1.5.c. Surveillance of the open dumping areas to determine the identity of contributors to such open dumps;

7.1.5.d. The removal and keeping of certain indications of ownership as contemplated by W. Va. Code §20-7-26(b); or

7.1.5.e. Testimony before a judicial officer regarding the identity of contributors to the dump.

7.2. Protection of the Environment and the Public.

7.2.1. Any site at which the following protective measures have not been instituted shall be classified as an open dump:

7.2.1.a. Measures must be taken to prevent the discharge of pollutants from the accumulated waste into the waters of the State (e.g., measures to prevent runoff into surface water bodies or the infiltration of leachates to local aquifers);

7.2.1.b. Measures must be taken to impede the access of disease vectors to the accumulated waste (e.g., the application of cover material at appropriate frequencies or other techniques

approved in writing by the chief);

7.2.1.c. Measures must be taken to prevent the introduction of hazardous or infectious materials to the accumulated waste;

7.2.1.d. Measures must be taken to reduce the risk of fire in the accumulated waste (e.g., venting measures to reduce the concentration of explosive gases generated by the waste);

7.2.1.e. Measures must be taken to limit public access to the accumulated waste (e.g., the erection of fencing to surround the accumulated waste);

7.2.1.f. Measures must be taken to prevent adverse impacts to area wildlife, particularly with regard to the destruction or adverse modification of habitat critical to any endangered or threatened species of animal or plant; and

7.2.1.g. Any other similar measures specified by the director in Division policy or regulation.

7.3. Schedules of Compliance for Open Dumps.

7.3.1. Schedules of compliance for open dumps will contain a sequence of enforceable actions.

7.3.2. Schedules of compliance for open dumps may not exceed a total time period for all compliance actions of two (2) years from the date of issuance.

7.4. Enforcement.

7.4.1. If the chief or the director has reasonable cause to believe that a potential for environmental or aesthetic degradation or for harm to the health, safety, or welfare of the public exists at any open dump, he may require any person responsible for that open dump to conduct such tests or furnish such information as may be reasonably required to determine whether that dump is or may be causing said degradation or harm.

7.4.2. The Division may conduct any test deemed necessary by the chief or the director in making an investigation or determination of a potential for environmental or aesthetic degradation or for harm to the health, safety, or welfare of the public.

7.4.3. The chief or the director may perform, or require a person by order to perform, any and all acts necessary to carry out the provisions of the Act and these regulations with regard to an open dump.

7.4.3.a. Any person having an interest which is or may be affected or who is aggrieved by any order of the chief or the director with regard to an open dump may appeal such order to the Water Resources Board pursuant to the provisions of the W. Va. Code §20-5F-7.

7.5. Cooperation with the State Division of Highways.

7.5.1. Roadway Specifications. Standards and design specifications for roadways which provide access to solid waste facilities, as promulgated by the commissioner of the West Virginia Division of Highways, are hereby incorporated by reference. A solid waste facility permit may be suspended or revoked if the owner or operator fails to comply with such roadway specifications.

7.5.2. Waste-In-Transit Inspections. The chief may designate authorized representatives to coordinate with authorized representatives of the commissioner of the West Virginia Division of Highways in conducting inspections of solid waste in transit. Such waste-in-transit inspections will be conducted at weigh stations or other designated sites throughout the State pursuant to regulations promulgated by the Division of Highways.

7.6. Cooperation with the State Tax Department.

7.6.1. The Division will cooperate with the State Tax Commissioner in the handling of proceeds received by the State Tax Department from fees collected pursuant to the Act.

7.7. Cooperation with the State Health Division.

7.7.1. The Division will cooperate with the West Virginia Division of Health in assessing the potential for contamination of public water supplies from any proposed or approved solid waste facility, open dump, or other property where solid waste is present.

7.8. Cooperation with County and Regional Solid Waste Authorities.

7.8.1. The Division will provide such technical assistance concerning the handling and disposal of solid waste to each county and regional solid waste authority as is reasonable and practicable with existing Division resources and appropriations available for such purposes.

APPENDIX A

Schedule of Solid Waste Facility Permit Application Fees

Type of Solid Waste Facility	Application Fee
Class F Industrial Solid Waste Facility	\$5,000.00
Class G Commercial Industrial Solid Waste Facility	\$7,500.00
Renewal of Permit	\$1,000.00
Solid Waste Facility Closure	\$2,500.00
Major Modification to Approved Solid Waste Facility	\$750.00
Minor Modification to Approved Solid Waste Facility	\$250.00
Background Investigation of Prospective Permittees*	\$1,000.00*

* Fee for each person filing a background investigation disclosure statement as required pursuant to Section 3.14.5.a of these regulations.



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1356 Hansford Street
Charleston, WV 25301-1401

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

September 18, 1992

OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

SEP 21 9 20 AM '92

FILED

Honorable Ken Hechler
Secretary of State
Building 1, Suite 157-K
Charleston, West Virginia 25305

Dear Secretary Hechler:

On August 17, 1992, the Division of Environmental Protection, Office of Waste Management filed 2 sets of proposed regulations concerning solid waste management (Title 47, Series 38A "Municipal Solid Waste Management Regulations" and Title 47, Series 38B "Industrial Solid Waste Management Regulations") with your office indicating written comments will be accepted by the Division through September 18, 1992.

Upon recent consideration of the length and complexity of the regulations, the Division deems it necessary to extend the written comment period through October 30, 1992. Written comments can be sent to the following address:

DEP Rule Comments
Office of Waste Management
1356 Hansford Street
Charleston, West Virginia 25301

ATTN: Bill Rheinlander

Written comments will be accepted by the Division no later than October 30, 1992 at 4:30 p.m.

Sincerely,

David C. Callaghan
Director, DEP

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