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FINAL ACTION ON REGULATIONS

Subtitle 51 DISPOSAL OF CONTROLLED HAZARDOUS SUBSTANCES

Authority: Health-Environmental Article, §§7-208 — [[7-]] 7-266, Annotated Code of Maryland

Notice of Final Action

On January 19, 1984, amendments to **Chapters .01 — .07 under COMAR 10.51 Disposal of Controlled Hazardous Substances,** were adopted by the Secretary of Health and Mental Hygiene.

These amendments, which were proposed for adoption in 10:23 Md. R. 2089 — 2123 (Nov. 11, 1983), have been adopted substantially as proposed with the nonsubstantitive changes shown below.

Effective Date: February 13, 1984.

10.51.02 Indentification and Listing of Hazardous Waste

.04 Exclusions.

A. Materials Which Are Not Solid Wastes. The following materials are not solid wastes for the purpose of this chapter:

(1) — (4) (proposed text unchanged)

[[[(b) Contaminated soils and other solids recovered from spills or removed from old disposal sites containing PCB at concentrations of less than 50 ppm which shall be disposed of at approved sites only if they do not qualify as a hazardous waste under any other section of this regulation.

(6) For the purpose of disposal of waste mixtures containing insignificant amounts of DHS, it is the obligation of the waste generator to show that the concentration of the DHS is such that the waste mixture can be disposed of in places other than a facility.]]]

Ed. Note: The above text was not in existence at the time of proposed action and was erroneously proposed for repeal. The text which follows should have been repealed instead.

[[(5) Solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal), including phosphate rock and overburden from the mining of uranium ore.

(6) Cement kiln dust waste.]]

B. Solid Wastes Which Are Not Hazardous Wastes. The following solid wastes are not hazardous wastes.

(1) — [[(5)]](6) (proposed text unchanged)

[[(6)]] (7) — [[(8)]] (9) (proposed text unchanged)

C. — D. (proposed text unchanged)

10.51.04 Standards Applicable to Transporters of Hazardous Waste

.01 General.

A. — E. (proposed text unchanged)

F. Driver Certificate.

(1) Applicability. A person may not transport any CHS from any source in the State or to any CHS Facility in the State unless a driver certificate has been issued for the Vehicle driver. This section does not apply to persons transporting CHS generated and disposed of on-site. [[*and who transport the CHS on roads maintained by the Facility.*]]

10.51.05 Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities

.06 Ground-Water Protection.

A. — H. (proposed text unchanged)

I. Detection Monitoring Program. An owner or operator required to establish a detection monitoring program under this section shall, at a minimum, discharge the following responsibilities:

(1) — (3) (proposed text unchanged)

(4) The owner or operator shall determine ground water quality at each monitoring well at the compliance point at least [[*semi-annually*]] *quarterly during the active life of a regulated unit (including the closure period) and the post-closure care period. The owner or operator shall express the ground water quality at each monitoring well in a from necessary for the determination of statistically significant increases under §H(11).*

(5) — (11) (proposed text unchanged)

J. — K. (proposed text unchanged)

.12 Waste Piles.

A. — D. (proposed text unchanged)

D-1. Inspections and Testing.

(1) — (3) (proposed text unchanged)

(4) While a waste pile is in operation, it shall be inspected weekly and after storms to detect evidence of any of the following:

(a) Deterioration, malfunctions, or improper operation of run-on and run-off control systems;

(b) The presence of liquids in leak detection systems, if installed;

(c) Proper functioning of wind dispersal control systems, if present; and

(d) The presence of leachate in and proper functioning of leachate collection and removal systems, if present.

D-2. — *G.* (proposed text unchanged)

.15-1 Thermal Destruction of Hazardous Waste.

A. — B. (proposed text unchanged)

C. General Requirements.

(1) (proposed text unchanged)

(2) Except for small quantity hazardous waste, the following hazardous waste shall be thermally destroyed only in a hazardous waste incinerator that has been permitted under COMAR 10.51.07.02 and .03 to thermally destroy hazardous waste:

(a) — (b) (proposed text unchanged)

(c) Hazardous waste with a heating value of 6,000 [[*BTU's*]] *BTU/lb. or greater, not used as a fuel for heat energy recovery, and containing material listed in COMAR 10.51.02, Appendix V.*

(d) Hazardous waste with a heating value of 6,000 BTU/lb. or greater [[*mixed with a hazardous waste with*]] *containing a constituent or constituents having a heating value of less than 6,000 BTU/lb. unless the:*

(i) (proposed text unchanged)

(ii) Hazardous waste with a heating value of 6,000 BTU/lb. or greater does not contain more than 1 percent by volume of the [[*hazardous waste with a heating value of less than 6,000 BTU/lb. except that if the hazardous waste with*]] *constituent or constituents having a heating value of less than 6,000 BTU/lb. except that if the constituents having a heating value of less than 6,000 BTU/lb. is primarily water the volume may be greater than 1 percent. However, the Department reserves the right to limit the amount of water percent in the hazardous waste to be thermally destroyed such that the flame temperature is not reduced to a level where incomplete combustion of the hazardous waste may be expected.*

(e) (proposed text unchanged)

(3) (proposed text unchanged)

(4) The requirements of the Federal Toxic Substances Control Act, 15 U.S.C. 2505(e) (TOSCA), and regulations adopted under that Act, 40 C.F.R. §761, shall take precedence over the requirements of this regulation concerning polychlorinated biphenyls (PCBs), to the extent that there is any inconsistency between them. A person may not thermally destroy PCB's except in compliance with the Toxic Substances Control Act, 15 U.S.C. 2601 (TOSCA), and COMAR 10.51.07.

D. — M. (proposed text unchanged)

ADELE WILZACK
Secretary of Health and Mental Hygiene

[Md. R. Doc. No. 33-R-392-F. Filed at Div. of St. Doc. Jan. 25, 1984.]

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PROPOSED ACTION ON REGULATIONS

Subtitle 51 DISPOSAL OF CONTROLLED HAZARDOUS SUBSTANCES

Authority: Health-Environmental Article, §§7-208 — 7-7-266, Annotated Code of Maryland

Notice of Proposed Action

The Office of Environmental Programs proposes to amend the COMAR chapters printed below, to be effective on or about December 30, 1983.

Estimate of Economic Impact

I. Summary. The proposed amendments will make the State substantially equivalent to the EPA as regards to incineration and land disposal of hazardous waste. The State, additionally, has created a new category of incineration permit, the Limited Facility Permit, that will cause the State's program to be more restrictive than the Federal Program.

II. Types of Economic Impacts.	Revenue (+) Expense (–)	Magnitude
A. On issuing agency: Continued grant funding is assured	(+)	$750,000
B. On other State or local agencies affected:	NONE	
	Benefit (+) Cost (–)	**Magnitude**
C. On regulated industries or trade groups: For land disposal facilities: negligible; some limited facilities will incur increased cost		Indeterminate
D. On other industries or trade groups affected: Generators of hazardous waste that previously used unlicensed facilities will have to pay more to dispose of their waste.		Indeterminate
E. Direct and indirect effects on public: Improved air quality and protection of irreplaceable ground water supplies		Incalculable

III. Assumptions. (Identified by Impact Letter and Number from Section II): It must be assumed that protection of public health and the environment will carry a cost associated with it. This cost will be borne by industry, resulting in increased responsibility for their management and disposal. The impact of requiring a limited facility permit will be minor for installations regulated under COMAR 10.18.11.06, which requires sources burning waste oil as fuels to obtain an approval from the Air Management Administration. The limited facility regulations will require a more detailed review and will entail a more complicated process for obtaining a permit, but in many cases the installations will be able to continue current practices. Because the proposed regulations establish more specific requirements than those now in COMAR 10.51.05.15-1 or COMAR 10.18.11.06, certain sources will have to discontinue current practices because of their inability to meet the specific requirements proposed today.

Opportunity for Public Comment

The Office of Environmental Programs will hold a hearing concerning the adoption of these regulations on December 12, 1983 in the Auditorium of 300 West Preston Street, Baltimore, Maryland, at 7 p.m. All interested persons are invited to attend and give their views.

Written comments may be sent to Raymond A. Huber, Regulations Coordinator, O'Conor Building, Room 314-A, 201 West Preston Street, Baltimore, Maryland 21201. These comments must be received not later than the date of the hearing.

10.51.01 Hazardous Waste Management System: General

.02 Availability of Information Confidentiality of Information.

A. Except in accordance with §D, the department shall protect any information contained in the application, or other records, reports, or plans as confidential upon a showing by any person that the information if made public would divulge methods or processes entitled to protection as trade secrets, or proprietary business information relating to processes of production, methods of manufacturing, or production volume which are of financial or commercial value.

A.-1 Claims of confidentiality for the name and address of any permit applicant or permittee will be denied. Claims for other information shall be made and substantiated at the time the application is submitted. If substantiation is not provided, the Secretary will notify the applicant by certified mail of the requirement. If the substantiation is not provided after 10 days of receipt of the certified mail, the information in question shall be placed in the public file.

B. — D. (text unchanged)

.03 Definitions.

A. (text unchanged)

B. Terms.

(1) — (26-1) (text unchanged)

(26-2) "Hazardous waste incinerator" means an enclosed device using controlled flame combustion, which is used to thermally break down hazardous waste and which is subject to the performance requirements of COMAR 10.51.05.15 or 15-1. Examples are notary kiln, hazardous waste incinerators, hazardous waste fluidized bed incinerators, and liquid injection hazardous waste incinerators.

(27) — (27-1) (text unchanged)

(27-2) "Inactive disposal Facility" means a disposal facility that is no longer operated but is maintained to permanently contain [DHS] *CHS*.

(28) [''Incinerator" means an enclosed device using controlled flame combustion, the primary purpose of which is to thermally breakdown hazardous waste. Examples of incinerators are rotary kiln, fluidized bed an liquid injection incinerators.] Repealed

(29) — (66) (text unchanged)

(66-1) "Thermal destruction" means thermal treatment using controlled flame combustion. "Thermally destroy" or "incinerate" means the act of thermal destruction.

(67) — (77) (text unchanged)

10.51.02 Identification and Listing of Hazardous Waste

.02 Definition of Solid Waste.

A. — B. (text unchanged)

C. A material is "discarded" if it is [abandoned (and not used, re-used, reclaimed or recycled) by being]:

(1) (text unchanged)

(2) Burned or incinerated [except if the material is being burned as a fuel for the purpose of recovering unable energy] *after having served it's original intended use;* or

(3) Physically, chemically, or biologically treated [(other than burned or incinerated] in lieu of or before being disposed of.

D. — E. (text unchanged)

F. Empty Container.

(1) — (3) (text unchanged)

(4) Residues of Hazardous Waste in Empty Containers.

(a) Any hazardous waste remaining in either an empty container or an inner liner removed from an empty container, as defined in §F(1) — (3), is not subject to COMAR 10.51.01 — 10.51.09.

(b) Any hazardous waste in either a container that is not empty or an inner liner removed from a container that is not empty, as defined in §F(1) — (3), is subject to these regulations.

.04 Exclusions.

A. Materials Which Are Not Solid Wastes. The following materials are not solid wastes for the purpose of this chapter:

(1) Domestic sewage [, and any mixture of domestic sewage and other wastes] that passes through a sewer system to a publicly-owned treatment work for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(2) — (4) (text unchanged)

[(5) Contaminated soils and other solids recovered from spills or removed from old disposal sites containing PCB at concentrations of less than 50 ppm which shall be disposed of at approved sites only if they do not qualify as a hazardous waste under any other section of this regulation.

(6) For the purpose of disposal of waste mixtures containing insignificant amounts of DHS, it is the obligation of the waste generator to show that the concentration of the DHS is such that the waste mixture can be disposed of in places other than a facility.]

B. Solid Wastes Which Are Not Hazardous Wastes. The following solid wastes are not hazardous wastes.

(1) — (5) (text unchanged)

(6) For the purpose of disposal of waste mixtures containing insignificant amounts of [DHS] *CHS* which are not hazardous wastes as defined by COMAR 10.51.02.03A(2), it is the obligation of the waste generator to show that the concentration of the [DHS] *CHS* is such that the waste mixture can be disposed of in places other than a facility.

(7) Solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal), including phosphate rock and overburden from the mining of uranium ore.

(8) Cement kiln dust waste.

C. (text unchanged)

D. Samples.

(1) (text unchanged)

(2) In order to qualify for the exemption in §D(1)(a) and (b), a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector shall:

(a) Comply with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(b) Comply with the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample;

(c) Package the sample so that it does not leak, spill or vaporize from its packaging, and assure that the following information accompanies the samples:

(i) The sample collector's name, mailing address, and telephone number,

(ii) The laboratory's name, mailing address, and telephone number,

(iii) The quantity of the sample,

(iv) The date of shipment, and

(v) A description of the sample.

(3) (text unchanged)

.05 Special Requirements for Hazardous Waste Generated by Small Quantity Generators.

A. — C. (text unchanged)

D. In order for hazardous waste to be excluded from regulation under this chapter, the generator shall comply with COMAR 10.51.03.02. The generator must also either treat or dispose of the waste in an on-site facility, or ensure delivery to an off-site treatment, storage, or disposal facility, either of which is:

(1) — (3) (text unchanged)

(4) Permitted under COMAR 10.18.02.03B(1) (air quality operating permit) and has a limited facility permit; or

(5) A generating station constructed by an electric company and has a limited facility permit.

E. (text unchanged)

F. *Hazardous waste that is removed from the site of generation and is accumulated for the purposes of thermal destruction or is thermally destroyed in quantities greater than the minimum quantities specified in §§A, B, and C of this regulation may not be excluded from the requirements of COMAR 10.51.05.15, 10.51.07.02, and 10.51.07.05.*

.06 Special Requirements for Hazardous Waste Which Used, Re-Used, Recycled, or Reclaimed, and Residues from Emptied Drums.

A. (text unchanged)

B. A hazardous waste *which is a sludge, or* which is listed in Regulations .14 — .17, or which contains one or more hazardous wastes listed in Regulations .14 — .17 and which is transported or stored before being used, re-used, recycled, or reclaimed, is subject to the following requirements with respect to its transportation or storage:

.07 Criteria for Identifying the Characteristics of Hazardous Waste.

A. — B. (text unchanged)

[C. Residues of hazardous waste in empty containers have:

(1) Any hazardous waste remaining in either:

(a) An empty container; or

(b) An inner liner removed from an empty container, as defined in 40 CFR §261.7(b), is not subject to COMAR 10.51.01 — 10.51.09.

(2) Any hazardous waste in either:

(a) A container is not empty; or

(b) An inner liner removed from a container that is not empty, as defined in 40 CFR §261.7(b), is subject to these regulations.]

.15 Hazardous Waste from Non-specific Sources.

Industry	EPA Hazardous Waste Number	Hazardous Waste	Hazardous Code
Generic	F001 — F002	(text unchanged)	(text unchanged)
	F003	(text unchanged)	[(T)]*I*
	F004 — F015	(text unchanged)	(text unchanged)

.16 Hazardous Waste from Specific Sources.

Industry	EPA Hazardous Waste Number	Hazardous Waste	Hazardous Code
(text unchanged)	K001 — K030	(text unchanged)	(text unchanged)
(text unchanged)	K083	Distillation bottoms from [andine] *aniline* production	(text unchanged)
(text unchanged)	K103 — MD01	(text unchanged)	(text unchanged)

.17 Discarded Commercial Chemical Products, Off-Specification Species, Containers, and Spill Residues of These.

The following materials or items are hazardous wastes if they are discarded or intended to be discarded.

A. — D. (text unchanged)

E. The commercial chemical products, mixtures, or manufacturing chemical intermediates, referred to in §§A — D, are identified as acute hazardous wastes (H) and are subject to the small quantity exclusion defined in Regulation .05C. These wastes and their corresponding EPA Hazardous Waste Numbers are:

HAZARDOUS WASTE NUMBER	SUBSTANCE
P001 — P0064	(text unchanged)
P065	Mercury Fulminate (R), *(T)*
P066 — P123	(text unchanged)
M001	Polychlorinated Biphenyls (PCB) *(above 500 ppm)*

F. The commercial chemical products or manufacturing chemical intermediates, referred to in §§A, B, and D, are identified as toxic wastes (T) unless otherwise designated and are subject to the small quantity exclusion defined in Regulation .05A and B. These wastes and their corresponding EPA Hazardous Waste Numbers are:

HAZARDOUS WASTE NUMBER	SUBSTANCE
U001 — U005	(text unchanged)
U006	Acetyl Chloride (C,R,T,)
U007 — U237	(text unchanged)
U238	Ethyl [carbonate] *carbamate* (urethan)
U239 — U243	(text unchanged)
U244	[Thiuram] *Thiram*
U245 — U246	(text unchanged)
U247	*Methoxychlor*
U248	*Polychlorinated Biphenyls (50 to 500 ppm)*

10.51.03 Standards Applicable to Generators of Hazardous Waste

.01 Purpose, Scope and Applicability.

A. — D. (text unchanged)

E. A person who generates a hazardous waste as defined by **COMAR 10.51.02** is subject to the compliance requirements and penalties prescribed in the [Natural Resources Article §§8-1414, 8-1416, and 8-1502] *Health Environmental Article, §§7-208 Inclusive, Annotated Code of Maryland,* if he does not comply with the requirements of this chapter.

F. (text unchanged)

.05 Pre-transport Requirements.

A. — D. (text unchanged)

E. Accumulation Time.

(1) A generator may accumulate hazardous waste on-site without a permit for 90 days or less if:

(a) (text unchanged)

(b) The waste is placed in containers which meet the standards of §A *and COMAR 10.51.05.09 E, F, H, and I.*

(c) — (d) (text unchanged)

(2) (text unchanged)

10.51.04 Standards Applicable to Transporters of Hazardous Waste

.01 General.

A. — B. (text unchanged)

C. Certificate

(1) (text unchanged)

(2) As a condition to the issuance of a certificate, the Department may require a person to do the following:

(a) Report periodically, on a form provided by the Department, on the source, disposal destination, volume, and nature of the [DHS] *CHS* transported;

(b) (text unchanged)

(c) Secure a bond of not less than $10,000 for the purpose of indemnifying the State for abatement of pollution resulting from the improper transportation or spill of [DHS] *CHS*; and

(d) Pay a yearly fee for certification not to exceed $50 per vehicle used for hauling [DHS] *CHS*.

(3) A request for certification shall be submitted in writing and shall include information pertaining to the nature and quantity of the [DHS] *CHS* to be transported, the source and destination, the method of transportation, the specific information pertaining to the vehicles used to transport [DHS] *CHS*, such as vehicle age and construction, specifications, and the fee for certification. Failure to provide this information, the fee for certification or other information required by the Department shall constitute grounds for denial of certification. The certification shall be carried in the vehicle at all times and presented upon request.

(4) The State Fire Marshall, and other public safety agencies approved by him, are certified [DHS] *CHS* transporters.

(5) Utility maintenance crews are certified [DHS] *CHS* transporters for [DHS] *CHS* transported during the normal execution of their duties.

(6) This regulation does not apply to transportation within industrial plant sites such as transport of a [DHS] *CHS* from an in-plant storage area to an in-plant waste treatment facility.

(7) Health care facilities licensed by the Department of Health and Mental Hygiene are certified [DHS] *CHS* transporters.

(8) Approved personnel of the Department of Health and Mental Hygiene are certified CHS transporters.

(9) Interstate Certificates.

(a) Interstate carriers with more than 10 trucks operating in or out of the State, and servicing more than three States, may apply for Interstate Certificates if the carrier:

(i) Has 5 vehicle certificates currently issued; and

(ii) Meets the insurance requirements of 49 CFR Part 387 — Minimum Levels of Financial Responsibility for Motor Carriers.

(b) Interstate certificates are transferable from one vehicle to another. The location of the certificate shall be registered with the Department.

(c) The carrier shall notify the Department 24 hours before use of the certificate. The notification will include information detailing the type of vehicle, serial number, make, model, State of registration, license destination, material transported and other information as may be requested.

(d) The maximum number of transferable certificates issued may not exceed the number of permanent certificates issued to a carrier.

(e) Each certificate issued shall carry a fee of $50.

D. Mixing. Except under the supervision of the Department during an emergency, a CHS hauler may not mix, as defined by this regulation, any CHS except in a CHS facility.

(1) Mixing includes any blending, mingling, combining, consolidating or putting together of CHS unless specifically excluded under §D(2).

(2) Mixing does not include the blending, mingling, combining, or putting together of waste within but not among the following categories of hazardous waste from the same or different sources provided the substances are chemically and physically compatible:

(a) Acids of less than 1 molar concentrations;

(b) Bases of less than 1 molar concentrations;

(c) Cyanides (With the following EPA Hazardous Waste Numbers) — F007, F008, F009, F010, F011, F013, F014, F015, F016;

(d) Halogenated solvents — contaminated with 1 percent or less of non-halogenated;

(e) Solvents non-halogenated — contaminated with 1 percent or less of halogenated.

E. Stoppage. Except under the supervision of the Department during an emergency, a CHS hauler may not store CHS except in a CHS facility. Storage in a CHS vehicle does not include periods of stoppage, as defined by §E(1), if the conditions in §E(2) are met.

(1) Stoppage is a period of time not to exceed 72 hours during which a CHS vehicle is at rest. The cumulative period of stoppage may not exceed 5 days for a particular shipment of CHS within the State. Any stoppage in excess of 12 hours must be at Facility or other suitable site.

(2) During periods of stoppage, for instance, at truck stops or truck terminals, a CHS hauler must comply with COMAR 10.51.05 Regulation .02 G and H, Regulation .03 E, F, G, and H, and Regulations .04, .05, .09 and .10.

F. Driver Certificate.

(1) Applicability. A person may not transport any CHS from any source in the State or to any CHS Facility in the State unless a driver certificate has been issued for the Vehicle Driver. This section does not apply to persons transporting CHS generated and disposed of on-site and who transport the CHS on roads maintained by the Facility.

(2) The Driver Certificate authorizes it's holder to operate a vehicle transporting CHS. The Driver Certificate shall be effective for 3 years.

(3) Each CHS vehicle operator shall:

(a) Pay an annual Driver Certificate fee of $20 to the Department.

(b) Carry the Driver Certificate in the cab of the CHS vehicle at all times when transporting CHS; and

(c) Submit evidence of satisfactory completion of an approved training program as described in §F(4), below.

(4) Approved Training Program. At a minimum, an approved training program shall include the following:

(a) Training in the requirements necessary to transport hazardous waste. Emphasis should be placed on the ability to verify proper DOT shipping names, hazard class and EPA waste codes. Special attention should be directed to the Maryland Hazardous Waste Manifest, other state manifest requirements, and the proper disbursement of manifest copies.

(b) Training in the required labeling and marking of all containers of 110 gallons or less.

(c) Training in placarding. All drivers of vehicles transporting hazardous waste shall be able to appropriately placard their truck according to the DOT regulations under COMAR 11.16.01 (49 CFR 172 Subpart F).

(d) Training in the Federal Motor Carrier Safety Administration regulations including proper maintenance of a driver's daily log.

(e) Training in emergency procedures to follow in case of an accident or spill.

(f) Training in Maryland's hazardous waste regulations and law (Disposal of CHS (COMAR 10.51)) — specifically, "Standards Applicable to Transporters of Hazardous

Waste" and Health-Environmental Article, §§7-249 through 7-253, Annotated Code of Maryland.

(5) Instructors conducting an approved training program shall, at a minimum, have successfully completed an approved instruction training program, or have 5 years experience in the trucking industry with at least 2 years involvement in safe driving activities or training.

(6) Satisfactory completion of an approved written examination may be required by the Department.

.02 Compliance with the Manifest System and Recordkeeping.

A. The Manifest System.

(1) — (4) (text unchanged)

(5) The requirements of §A(3) and (4) do not apply to [rail or] water (bulk shipment) transporters if:

(a) The hazardous waste is delivered by [rail or] water (bulk shipment) to the designated facility.

(b) — (c) (text unchanged)

(d) The person delivering the hazardous waste to the initial [rail or] water (bulk shipment) transporter obtains the date of delivery and signature of the water (bulk shipment) transporter or the manifest and forwards it to the designated facility; and

(e) A copy of the shipping paper or manifest is retained by each [rail or] water (bulk shipment) transporter in accordance with §C.

(6) — (7) (text unchanged)

B. — C. (text unchanged)

.04 Bonding.

A. The Department as a condition to the issuance of a [DHS] *CHS* Hauler Certificate shall require a person to secure a bond of not less than [$10,000] *$50,000* for the purpose of idemnifying the State for abatement of pollution from the improper transportation or spill of [DHS] *CHS*.

B. (text unchanged)

C. Upon expiration of the time limitations specified in the certification, the Department shall release the bond, provided that all [provision] *provisions* of the certificate and the [Natural Resources Article, 8-1413.2] *Health-Environmental Article, 7-210 through 7-268, inclusive,* have been satifactorily met. Failure to fully comply with the provisions set forth above, or revocation of the certificate, shall constitute grounds for the Department to initiate forfeiture proceedings.

D. (text unchanged)

10.51.05 Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.

.01 General.

A. Purpose, Scope, and Applicability.

(1) — (2) (text unchanged)

(3) The requirements of this chapter do not apply to:

(a) A person disposing of hazardous waste by means of ocean disposal subject to a permit issued under the Marine Protection, Research, and Sancturaries Act[;] *and complying with the following regulations:*

(i) .02B, and

(ii) .05 B,C,D,(1),(2)(a), and F and G;

(b) — (h) (text unchanged)

B. Imminent Hazard Action. Notwithstanding any other provisions of these regulations, enforcement actions may be brought pursuant to [Natural Resources Article, §8-1415] *Health Environmental Article, §§7-206, inclusive.*

.02 General Facility Standards.

A. — E. (text unchanged)

F. General Inspections Requirements.

(1) (text unchanged)

(2) Development of Written Schedule.

(a) — (c) (text unchanged)

(d) The frequency of inspection may vary for the items on the schedule. However, it should be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident of the deterioration or malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, shall be inspected daily when in use. At a minimum, the inspection schedule shall include the items and frequencies called for in Regulations .09E, .10D, .11E, [.15D, .16D, and .17D] *.12D-1, and .15I.*

G. — H. (text unchanged)

.05 Manifest System, Recordkeeping, and Reporting.

A. — C. (text unchanged)

D. Operating Record.

(1) (text unchanged)

(2) The following information shall be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

(a) — (g) (text unchanged)

(h) Monitoring testing or analytical data where required by [COMAR 10.51.05.15] *Regulations .06, .12 D-1, .13 G,I,K, .14 D,J, and .15I.*

E. — G. (text unchanged)

H. Additional Reports. In addition to submitting the annual report and unmanifested waste reports described in Regulation .05F and G, the owner or operator shall also report to the Secretary:

(1) — (3) (text unchanged)

(4) As otherwise required by Regulations .06 and .11 — .14.

.06 (Repealed)

.06 Ground-Water Protection.

A. Applicability.

(1) Except as provided in §A(2), this regulation applies to owners and operators of facilities that treat, store, or dispose of hazardous waste in surface impoundments, waste piles, land treatment units, or landfills. The owner or operator shall satisfy the requirements of this regulation for all wastes (or constituents thereof) contained in any waste management unit at the facility that receives hazardous waste after January 26, 1983 (hereinafter referred to as a "regulated unit"). Any waste or waste constituent migrating beyond the waste management area under §F(2) is assumed to originate from a regulated unit unless the Secretary finds that the waste or waste constituent originated from another source.

(2) The owner or operator is not subject to this regulation if:

(a) He is exempted under COMAR 10.51.05.01.

(b) The Secretary finds, pursuant to Regulation .13K (4), that the treatment zone of a land treatment unit does not contain levels of hazardous constituents that are above background levels of those constituents by an amount that is statistically significant, and if an unsaturated zone monitoring program meeting the requirements of Regulation .13I has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life of the unit. An exemption under this paragraph

can only relieve an owner or operator of responsibility to meet the requirements of this chapter during the post-closure care period.

(c) The Secretary finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the post-closure care period specified under Regulation .07G. This demonstration shall be certified by a qualified geologist or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator shall base any predictions made under this paragraph on assumptions that maximize the rate of liquid migration.

(3) The regulations under this chapter apply during the active life of the regulated unit, including the closure period. After closure of the regulated unit, the regulations in this chapter:

(a) Do not apply if all waste, waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated at closure;

(b) Apply during the post-closure care period under Regulation .07G if the owner or operator is conducting a detection monitoring program under §I;

(c) Apply during the compliance period under §G if the owner or operator is conducting a compliance monitoring program under §J or a corrective action program under §K; or

(d) Apply if specified by the Secretary in a permit issued under COMAR 10.51.07.01B.

B. Required Program.

(1) Owners and operators subject to this chapter shall conduct a monitoring and response program as follows:

(a) Whenever hazardous constituents under §D from a regulated unit are detected at the compliance point under §F, the owner or operator shall institute a compliance monitoring program approved by the Secretary under §J;

(b) Whenever the ground water protection standard under §C is exceeded, the owner or operator shall institute a corrective action program approved by the Secretary under §K;

(c) Whenever hazardous constituents under §D from a regulated unit exceed concentration limits under §E in ground water between the compliance point under §F and the downgradient facility property boundary, the owner or operator shall institute a corrective action program approved by the Secretary under §K; or

(d) In all other cases, the owner or operator shall institute a detection monitoring program approved by the Secretary under §I.

(2) The Secretary will specify in the facility permit the specific elements of the monitoring and response program. The Secretary may include one or more of the programs identified in §B(1) in the facility permit as may be necessary to protect human health and the environment and will specify the circumstances under which each of the programs will be required. In deciding whether to require the owner or operator to be prepared to institute a particular program, the Secretary will consider the potential adverse effects on human health and the environment that might occur before final administrative action on a permit modification application to incorporate such a program could be taken.

C. Ground-Water Protection Standard. The owner or operator shall comply with conditions specified in the facility permit that are designed to ensure that hazardous constituents under §D entering the ground water from a regulated unit do not exceed the concentration limits under §E in the uppermost aquifer underlying the waste management area beyond the point of compliance under §F during the compliance period under §G. The Secretary will establish this ground water protection standard in the facility permit when hazardous constituents have entered the ground water from a regulated unit.

D. Hazardous Constituents.

(1) The Secretary will specify in the facility permit the hazardous constituents to which the ground water protection standard of §C applies. Hazardous constituents are constituents identified in Appendix V of COMAR 10.51.02 that have been detected in ground water in the uppermost aquifer underlying a regulated unit and that are reasonably expected to be in or derived from waste contained in a regulated unit, unless the Secretary has excluded them under §D(2).

(2) The Secretary will exclude an Appendix V constituent from the list of hazardous constituents specified in the facility permit if he finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to grant an exemption, the Secretary will consider the following:

(a) Potential adverse effects on ground water quality considering:

(i) The physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity of ground water and the direction of ground water flow;

(iv) The proximity and withdrawal rates of ground water users;

(v) The current and future uses of ground water in the area;

(vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water quality;

(vii) The potential for health risks caused by human exposure to waste constituents;

(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(ix) The persistence and permanance of the potential adverse effects; and

(b) Potential adverse effects on hydraulically-connected surface water quality, considering:

(i) The volume and physical and chemical characteristics of the waste in the regulated unit;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity and quality of ground water, and the direction of ground water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the regulated unit to surface waters;

(vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(vii) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(x) The persistence and permanence of the potential adverse effects.

(3) In making any determination under §D(2) about the use of ground water in the area around the facility, the Secretary will consider any identification of underground sources of drinking water and exempted aquifers made by the Approving Authority for the State's Underground Injection Control Program.

E. Concentration Limits.

(1) The Secretary will specify in the facility permit concentration limits in the ground water for hazardous constituents established under §D. The concentration of a hazardous constituent;

(a) May not exceed the background level of that constituent in the ground water at the time that limit is specified in the permit;

(b) For any of the constituents listed in Table 1, may not exceed the respective value given in that Table if the background level of the constituent is below the value given in Table 1; or

(c) May not exceed an alternate limit established by the Secretary under §E(2).

(2) The Secretary will establish an alternate concentration limit for a hazardous constituent if he finds that the constituent does not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In establishing alternate concentration limits, the Secretary will consider the following factors:

(a) Potential adverse effects on ground water quality, considering:

(i) The physical and chemical characteristics of the waste in the regulated unit, including it's potential for migration;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity of ground water and the direction of ground water flow;

(iv) The proximity and withdrawal rates of ground water users;

(v) The current and future uses of ground water in the areas;

(vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water quality;

(vii) The potential for health risks caused by human exposure to waste constituents;

(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(ix) The persistence and permanence of the potential adverse effects; and

(b) Potential adverse effects on hydraulically-connected surface water quality, considering:

(i) The volume and physical and chemical characteristics of the waste in the regulated unit;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity and quality of ground water, and the direction of ground water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the regulated unit to surface waters;

(vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(vii) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(x) The persistence and permanence of the potential adverse effects.

(3) In making any determination under §E(2) about the use of ground water in the area around the facility, the Secretary will consider any identification of underground sources of drinking water and exempted aquifers made by the Approving Authority for the State's Underground Injection Control Program.

Table 1 Maximum Concentration of Constituents for Ground-Water Protection

Constituent	*Maximum Concentration (Milligrams per liter)*
Arsenic	*0.05*
Barium	*1.0*
Cadmium	*0.01*
Chromium	*0.05*
Lead	*0.05*
Mercury	*0.002*
Selenium	*0.01*
Silver	*0.05*
Endrin (1, 2, 3, 4, 10-hexachloro-1,7-1 epoxy-1, 4, 4a, 5, 6, 7, 8, 9a-octahydro-1, 4-endo-5, 8-dimethano naphthalene)	*0.0002*
Lindane (1, 2, 3, 4, 5, 6-hexachlorocyclohexane, gamma isomer)	*0.004*
Methoxychlor (1, 1, 1-Trichloro-2, 2-bis (p-methoxyphenylethane)	*0.1*
Toxaphene ($C_{10}H_{10}C1_8$ Technical chlorinated camphene, 67-69 percent chlorine)	*0.005*
2, 4-D (2, 4, Dichlorophenoxyacetic acid)	*0.1*
2, 4, 5-TP Silvex (2, 4, 5-Trichlorophenoxypropionic acid)	*0.01*

F. Point of Compliance.

(1) The Secretary will specify in the facility permit the point of compliance at which the ground water protection standard of §C applies and at which monitoring shall be conducted. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units.

(2) The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit.

(a) The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit.

(b) If the facility contains more than one regulated unit, the waste management area is described by an imaginary line circumscribing the several regulated units.

G. Compliance Period.

(1) The Secretary will specify in the facility permit the compliance period during which the ground water protection standard of §C applies. The compliance period is the number of years equal to the active life of the waste management area (including any waste management activity before permitting, and the closure period), unless extended by Order of the Secretary.

(2) The compliance period begins when the owner or operator initiates a compliance monitoring program meeting the requirements of §J.

(3) If the owner or operator is engaged in a corrective action program at the end of the compliance period specified in §G(1), the compliance period is extended until the owner or operator can demonstrate that the ground water protection standard of §C has not been exceeded for a period of 3 consecutive years.

H. General Ground-Water Monitoring Requirements. The owner or operator shall comply with the following requirements for any ground water monitoring program developed to satisfy §§I, J, or K:

(1) Obtain approval of the Secretary before installation.

(2) The ground water monitoring system shall consist of a sufficient number of wells, installed at appropriate locations and depths to yield ground water samples from the uppermost aquifer that represent the quality of:

(a) Background ground water that has not been affected by leakage from a regulated unit; and

(b) Ground water passing the point of compliance.

(3) If a facility contains more than one regulated unit, separate ground water monitoring systems are not required for each regulated unit provided that provisions for sampling the ground water in the uppermost aquifer will enable detection and measurement at the compliance point of hazardous constituents from the regulated units that have entered the ground water in the uppermost aquifer.

(4) Installation shall be approved by a qualified geologist, as defined by COMAR 10.17.11.04 B(2). Installation shall be done according to COMAR 10.17.13.

(5) All monitoring wells shall be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing shall be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground water samples. The annular space, (that is, the space between the bore hole and well casing) above the sampling depth shall be sealed to prevent contamination of samples and the ground water.

(6) The ground water monitoring program shall include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of ground water quality below the waste management area. At a minimum the program must include procedures and techniques for:

(a) Sample collection;

(b) Sample preservation and shipment;

(c) Analytical procedures; and

(d) Chain of custody control.

(7) The ground water monitoring program shall include sampling and analytical methods that are appropriate for ground water sampling and that accurately measure hazardous constituents in ground water samples.

(8) The ground water monitoring program shall include a determination of the ground water surface elevation each time ground water is sampled.

(9) When appropriate, the ground water monitoring program shall establish background ground water quality for each of the hazardous constituents or monitoring parameters or constituents specified in the permit.

(10) In the detection monitoring program under §I., background ground water quality for a monitoring parameter or constituent shall be based on data from quarterly sampling of wells upgradient from the waste management area for 1 year.

(a) In the compliance monitoring program under §J, background ground water quality for a hazardous constituents shall be based on data from upgradient wells that:

(i) Is available before the permit is issued;

(ii) Accounts for measurement errors in sampling and analysis; and

(iii) Accounts, to the extent feasible, for seasonal fluctuations in background ground water quality if the fluctuations are expected to affect the concentration of the hazardous constituent.

(b) Background quality may be based on sampling of wells that are not upgradient from the waste management area when:

(i) Hydrogeologic conditions do not allow the owner or operator to determine what wells are upgradient; or

(ii) Sampling at other wells will provide an indication of background ground water quality that is as representative or more representative than that provided by the upgradient wells.

(c) In developing the data base used to determine a background value for each parameter or constituent, the owner or operator shall take a minimum of one sample from each well and a minimum of four samples from the entire system used to determine background ground water quality, each time the system is sampled.

(11) The owner or operator shall use the following statistical procedure in determining whether background values or concentration limits have been exceeded:

(a) If, in a detection monitoring program, the level of a constituent at the compliance point is to be compared to the constituent's background value and that background value has a sample coefficient of variation less than 1.00, the owner or operator:

(i) Shall take at least four portions from a sample at each well at the compliance point and determine whether the difference between the mean of the constituent at each well (using all portions taken) and the background value for the constituent is significant at the 0.05 level using the Cochran's Approximation to the Behren-Fisher Student's t-test as described in Appendix IV. If the test indicates that the difference is significant, the owner or operator shall repeat the same procedure (with at least the same number of portions as used in the first test) with a fresh sample from the monitoring well. If this second round of analyses indicates that the difference is significant, the owner or operator must conclude that a statistically significant change has occurred.

(ii) May use an equivalent statistical procedure for determining whether a statistically significant change has occurred. The Secretary will specify this procedure in the facility permit if he finds that the alternative procedure reasonably balances the probability of falsely identifying a non-contaminating regulated unit and the probability of failing to identify a contaminating regulated unit in a manner that is comparable to that of the statistical procedure described in §G(11)(a)(i).

(b) In all other situations in a detection monitoring program and in a compliance monitoring program, the owner or operator shall use a statistical procedure providing reasonable confidence that the migration of hazardous constituents from a regulated unit into and through the aquifer will be indicated. The Secretary will specify a statistical procedure in the facility permit that he finds:

(i) Is appropriate for the distribution of the data used to establish background values or concentration limits; and

(ii) Provides a reasonable balance between the probability of falsely identifying a non-contaminating regulated unit and the probability of failing to identify a contaminating regulated unit.

I. Detection Monitoring Program. An owner or operator required to establish a detection monitoring program under this section shall, at a minimum, discharge the following responsibilities:

(1) The owner or operator shall monitor for indicator parameters (for example, specific conductance, total organic carbon, or total organic halogen), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in ground water. The Secretary will specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:

(a) The types, quantities, and concentrations of constituents in wastes managed at the regulated unit;

(b) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area;

(c) The detectability of indicator parameters, waste constituents, and reaction products in ground water; and

(d) The concentrations or values and coefficients of variation of proposed monitoring parameters or constituents in the ground water background.

(2) The owner or operator shall install a ground water monitoring system at the compliance point as specified under §F. The ground water monitoring system shall comply with §H(2)(b), (3), and (5).

(3) Background Values. The owner or operator shall establish a background value for each monitoring parameter or constituent specified in the permit pursuant to §I(1). The permit will specify the background values for each parameter or specify the procedures to be used to calculate the background values.

(a) The owner or operator shall comply with §H (9) and (10) in developing the data base used to determine background values.

(b) The owner or operator shall express background values in a form necessary for the determination of statistically significant increase under §H (11).

(c) In taking samples used in the determination of background values, the owner or operator shall use a ground water monitoring system that complies with §H(2)(a), (3), and (5).

(4) The owner or operator shall determine ground water quality at each monitoring well at the compliance point at least semi-annually during the active life of a regulated unit (including the closure period) and the post-closure care period. The owner or operator shall express the ground water quality at each monitoring well in a form necessary for the determination of statistically significant increases under §H (11).

(5) The owner or operator shall determine the ground water flow rate and direction in the uppermost aquifer at least annually.

(6) The owner or operator shall use procedures and methods for sampling and analysis that meet the requirements of §H (6) and (7).

(7) Statistically Significant Increase. The owner or operator shall determine whether there is a statistically significant increase over background values for any parameter or constituent specified in the permit pursuant to §I(1) each time he determines ground water quality at the compliance point under §I(4).

(a) In determining whether a statistically significant increase has occurred, the owner or operator shall compare the ground water quality at each monitoring well at the compliance point for each parameter or constituent to the background value for that parameter or constituents, according to the statistical procedure specified in the permit under §H (11).

(b) The owner or operator shall determine whether there has been a statistically significant increase at each monitoring well at the compliance point within a reasonable time period after completion of sampling. The Secretary will specify that time period in the facility permit, after considering the complexity of the statistical test and the availability of the laboratory facilities to perform the analysis of ground water samples.

(8) If the owner or operator determines, pursuant to §I(7), that there is a statistically significant increase for parameters or constituents specified pursuant to §I(1) at any monitoring well at the compliance point, he shall:

(a) Notify the Secretary of this finding in writing within 7 days. The notification shall indicate what parameters or constituents have shown statistically significant increases.

(b) Immediately sample the ground water in all monitoring wells and determine the concentration of all constituents identified in Appendix V of ***COMAR 10.51.02*** *that are present in ground water.*

(c) Establish a background value for each Appendix V constituent that has been found at the compliance point under §I(8)(b) as follows:

(i) The owner or operator shall comply with §H (9) and (10) in developing the data base used to determine background values;

(ii) The owner or operator shall express background values in a form necessary for the determination of statistically significant increases under §H (11); and

(iii) In taking samples used in the determination of background values, the owner or operator shall use a ground water monitoring system that complies with §H (7)(a), (3), and (5).

(d) Within 90 days, submit to the Secretary an application for a permit modification to establish a compliance monitoring program meeting the requirements of §J. The application shall include the following information:

(i) An identification of the concentration of any Appendix V constituents found in the ground water at each monitoring well at the compliance point;

(ii) Any proposed changes to the ground water monitoring system at the facility necessary to meet the requirements of §J;

(iii) 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 §J;

(iv) For each hazardous constituent found at the compliance point, a proposed concentration limit under §E(1) (a) or (b), or a notice of intent to seek a variance under §E(2).

(e) Within 180 days, submit to the Secretary:

(i) All data necessary to justify any variance sought under §E(2); and

(ii) An engineering feasibility plan for a corrective action program necessary to meet the requirements of §K, unless all hazardous constituents identified under §I(8)(b) are listed in Table 1 of §E and their concentrations do not exceed the respective values given in that table, or the owner or operator has sought a variance under §E(2) for every hazardous constituent identified under §I(8)(b).

(9) If the owner or operator determines pursuant to §I(7) that there is a statistically significant increase of parameters or constituents specified pursuant to §I(1) at any monitoring well at the compliance point, he may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. While the owner or operator may make a demonstration under this paragraph in addition to, or instead of, submitting a permit modification application under §I(8)(d), he is not relieved of the requirement to submit a permit modification application within the time specified in §I(8)(d) unless the demonstration made under this paragraph successfully shows that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this paragraph, the owner or operator shall:

(a) Notify the Secretary in writing within 7 days of determining a statistically significant increase at the compliance point that he intends to make a demonstration under this paragraph;

(b) Within 90 days, submit a report to the Secretary which demonstrates that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation;

(c) Within 90 days, submit to the Secretary an application for a permit modification to make any appropriate changes to the detection monitoring program at the facility; and

(d) Continue to monitor in accordance with the detection monitoring program established under this section.

(10) If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of this section, he shall, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

(11) The owner or operator shall assure that monitoring and corrective action measures necessary to achieve compliance with the ground water protection standard under §C are taken during the term of the permit.

J. Compliance Monitoring Program. An owner or operator required to establish a compliance monitoring program under this section shall, at a minimum, discharge the following responsibilities:

(1) The owner or operator shall monitor the ground water to determine whether regulated units are in compliance with the ground water protection standard under §C. The Secretary will specify the ground water protection standard in the facility permit including:

(a) A list of the hazardous constituents identified under §D;

(b) Concentration limits under §E for each of those hazardous constituents;

(c) The compliance point under §F; and

(d) The compliance period of §G.

(2) The owner or operator shall install a ground water monitoring system at the compliance point as specified under §F. The ground water monitoring system shall comply with §H(2)(b), (3), and (5).

(3) If a concentration limit established under §J(1)(b) is based on background ground water quality, the Secretary will specify the concentration limit in the permit as follows:

(a) If there is a high temporal correlation between upgradient and compliance point concentrations of the hazardous constituents, the owner or operator may establish the concentration limit through sampling at upgradient wells each time ground water is sampled at the compliance point. The Secretary will specify the procedures used for determining the concentration limit in this manner in the permit. In all other cases, the concentration limit will be the mean of the pooled data on the concentration of the hazardous constituent.

(b) If a hazardous constituent is identified on Table 1 under §E and the difference between the respective concentration limit in Table 1 and the background value of that constituent under §H (9) and (10) is not statistically significant, the owner or operator shall use the background value of the constituent as the concentration limit. In determining whether this difference is statistically significant, the owner or operator shall use a statistical procedure providing reasonable confidence that a real difference will be indicated. The statistical procedure shall:

(i) Be appropriate for the distribution of the data used to establish background values; and

(ii) Provide a reasonable balance between the probability of falsely identifying a significant difference and the probability of failing to identify a significant difference.

(c) The owner or operator shall:

(i) Comply with §H (9) and (10) in developing the data base used to determine background values;

(ii) Express background values in a form necessary for the determination of statistically significant increases under §H (11); and

(iii) Use a ground water monitoring system that complies with §H(2)(a), (3), and (5).

(4) The owner or operator shall determine the concentration of hazardous constituents in ground water at each monitoring well at the compliance point at least quarterly during the compliance period. The owner or operator shall express the concentration at each monitoring well in a form necessary for the determination of statistically significant increases under §H (11).

(5) The owner or operator shall determine the ground water flow rate and direction in the uppermost aquifer at least annually.

(6) The owner or operator shall analyze samples from all monitoring wells at the compliance point for all constituents contained in Appendix V of COMAR 10.51.02 at least annually to determine whether additional hazardous constituents are present in the uppermost aquifer. If the owner or operator finds Appendix V constituents in the ground water that are not identified in the permit as hazardous constituents, the owner or operator shall report the concentrations of these additional constituents to the Secretary within seven days after completion of the analysis.

(7) The owner or operator shall use procedures and methods for sampling and analysis that meet the requirements of §H (6) and (7).

(8) The owner or operator shall determine whether there is a statistically significant increase over the concentration limits for any hazardous constituents specified in the permit pursuant to §J(1) each time he determines the

concentration of hazardous constituents in ground water at the compliance point.

(a) In determining whether a statistically significant increase has occurred, the owner or operator shall compare the ground water quality at each monitoring well at the compliance point for each hazardous constituent to the concentration limit for that constituent according to the statistical procedures specified in the permit under §H (11).

(b) The owner or operator shall determine whether there has been a statistically significant increase at each monitoring well at the compliance point, within a reasonable time period after completion of sampling. The Secretary will specify that time period in the facility permit, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground water samples.

(9) If the owner or operator determines, pursuant to §H, that the ground water protection standard is being exceeded at any monitoring well at the point of compliance, he shall:

(a) Notify the Secretary of this finding in writing within 7 days. The notification shall indicate what concentration limits have been exceeded.

(b) Submit to the Secretary an application for a permit modification to establish a corrective action program meeting the requirements of §K within 180 days, or within 90 days if an engineering feasibility study has been previously submitted to the Secretary under §I(8)(e). The application shall at a minimum include the following information:

(i) A detailed description of corrective actions that will achieve compliance with the ground water protection standard specified in the permit under §J(1); and

(ii) A plan for a ground water monitoring program that will demonstrate the effectiveness of the corrective action. This ground water monitoring program may be based on a compliance monitoring program developed to meet the requirements of this section.

(10) If the owner or operator determines, pursuant to §J(8), that the ground water protection standard is being exceeded at any monitoring well at the point of compliance, he may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis or evaluation. While the owner or operator may make a demonstration under this paragraph in addition to, or in lieu of, submitting a permit modification application under §J(9)(b), he is not relieved of the requirement to submit a permit modification application within the time specified in §J(9)(b) unless the demonstration made under this paragraph successfully shows that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis or evaluation. In making a demonstration under this paragraph, the owner or operator shall:

(a) Notify the Secretary in writing within seven days that he intends to make a demonstration under this paragraph;

(b) Within 90 days, submit a report to the Secretary which demonstrates what source other than a regulated unit caused the standards to be exceeded or that the apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation;

(c) Within 90 days, submit to the Secretary an application for a permit modification to make any appropriate changes to the compliance monitoring program at the facility; and

(d) Continue to monitor in accord with the compliance monitoring program established under this section.

(11) If the owner or operator determines that the compliance monitoring program no longer satisfies the requirements of this section, he shall, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

(12) The owner or operator shall assure that monitoring and corrective action measures necessary to achieve compliance with the ground water protection standard under §C are taken during the term of the permit.

K. Corrective Action Program. An owner or operator required to establish a corrective action program under this chapter shall, at a minimum, discharge the following responsibilities:

(1) The owner or operator shall take corrective action to ensure that regulated units are in compliance with the ground water protection standard under §C. The Secretary will specify the ground water protection standard in the facility permit, including:

(a) A list of the hazardous constituents identified under §D;

(b) Concentration limits under §E for each of those hazardous constituents;

(c) The compliance point under §F; and

(d) The compliance period under §G.

(2) The owner or operator shall implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place. The permit will specify the specific measures that will be taken.

(3) The owner or operator shall begin corrective action within a reasonable time period after the ground water protection standard is exceeded. The Secretary will specify that time period in the facility permit. If a facility permit includes a corrective action program in addition to a compliance monitoring program, the permit will specify when the corrective action will begin and such a requirement will operate instead of §J(9)(b).

(4) In conjunction with a corrective action program, the owner or operator shall establish and implement a ground water monitoring program to demonstrate the effectiveness of the corrective action program. This monitoring program may be based on the requirements for a compliance monitoring program under §J and shall be as effective as that program in determining compliance with the ground water protection standard under §C and in determining the success of a corrective action program under §J(5), when appropriate.

(5) In addition to the other requirements of this section, the owner or operator shall conduct a corrective action program to remove or treat in place any hazardous constituents under §D that exceed concentration limits under §E in ground water between the compliance point under §F and the downgradient facility property boundary. The permit will specify the measures to be taken.

(a) Corrective action measures under this paragraph shall be initiated and completed within a reasonable period of time considering the extent of contamination.

(b) Corrective action measures under this paragraph may be terminated once the concentration of hazardous constituents under §D is reduced to levels below their respective concentration limits under §E.

(6) The owner or operator shall continue corrective action measures during the compliance period to the extent necessary to ensure that the ground water protection standard is not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period, he

shall continue that corrective action for as long as necessary to achieve compliance with the ground water protection standard. The owner or operator may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if he can demonstrate, based on data from the ground water monitoring program under §J(4) that the ground water protection standard of §C has not been exceeded for a period of 3 consecutive years.

(7) The owner or operator shall report in writing to the Secretary on the effectiveness of the corrective action program. The owner or operator shall submit these reports quarterly.

(8) If the owner or operator determines that the corrective action program no longer satisfies the requirements of this section, he shall, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

.07 Closure and Post-Closure.

A. — B. (text unchanged)

C. Closure Plan; Amendment of Plan.

(1) The owner or operator of a hazardous waste management facility shall have a written closure plan. The plan shall be submitted with the permit application, in accordance with COMAR 10.51.07 and approved by the Secretary as part of the permit [insurance] *issuance proceeding*. The approved *closure* plan will become a condition of the permit. The plan shall be considered with §§B, D, E, and F of this regulation and the applicable closure requirements of Regulations .09 — .17 of this chapter. A copy of the approved plan and all revisions to the plan shall be kept at the facility until closure is completed and certified in accordance with §F. The plan shall identify steps necessary to completely or partially close the facility at any point during its intended operating life and to completely close the facility at the end of operating life. The closure plan shall include at least:

(a) A description of how and when the facility will be partially closed, if applicable, and ultimately closed. The description shall identify the maximum extent of the operation which will be unclosed during the life of the facility, and how the requirements of *§§B, D, E and F* and the applicable closure requirements of [Regulations .10E, .11F, .13H, .14D, .15E, .16E, and .17E will be met] *Regulations .09 — .17 will be met.*

(b) — (d) (text unchanged)

(2) — (3) (text unchanged)

(4) The Secretary will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the plan and request modifications of the plan within 30 days of the date of the notice. He will also, in response to a request or at his own discretion, hold a public hearing whenever a hearing might clarify one or more issues concerning a closure plan. The Secretary will give public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.) The Secretary will approve, modify, or disapprove the plan within [90]*180* days of its receipt. If the Secretary does not approve the plan, the owner or operator must modify the plan or submit a new plan for approval within 30 days. The Secretary will approve or modify this plan in writing within 60 days. If the Secretary modifies this plan, this modified plan becomes the approved closure plan. The Secretary's decision shall assure that the approved closure plan is consistent with [§C(1)] *§§B, D, E, F and closure requirements of Regulations .09 — .17.* A copy of this modified plan shall be mailed to this owner or operator.

D. Time Allowed for Closure.

(1) (text unchanged)

(2) The owner or operator shall complete closure activities in accordance with the approved closure plan and within 6 months after receiving the final volume of wastes. The Secretary may approve a longer closure period under §C(3) if the owner, or operator can demonstrate that:

(a) — (b) (text unchanged)

(c) The closure of activities will, of necessity, take longer than [180] *90* days to complete, or the facility has the capacity to receive additional wastes, or there is a reasonable likelihood that a person other than the owner or operator will recommence operation of the site, closure of the facility would be incompatible with continued operation of the site, and

(d) (text unchanged)

E. — F. (text unchanged)

G. Post-closure Care and Use of Property; Period of Care.

[(1) Post-closure care shall consist of at least:

(a) Ground water monitoring and reporting in accordance with the requirements of Regulation .06; and

(b) Maintenance of monitoring and waste containment systems as specified in Regulations .06B, .11C and F, .13H and .14D when applicable.]

(1) Post-closure care shall continue for 30 years after the date of completing closure and shall consist of at least the following:

(a) Ground water monitoring and reporting as applicable;

(b) Maintenance of monitoring and waste containment systems as applicable.

(2) — (5) (text unchanged)

H. Post-closure Plan, Amendement of Plan. [The owner or operator of a disposal facility shall have a written post-closure plan. The plan shall be submitted with the permit application. In accordance with Regulation .08 of this chapter and approved by the Secretary as part of the permit issuance preceeding under Regulation .08 of this chapter. In accordance with Regulation .08 of this chapter, the approved post-closure plan will become a condition of any permit issued. A copy of the approved plan and all revisions to the plan shall be kept at the facility until the post-closure care period begins. This plan shall identify the activities which will be carried on after closure and the frequency of these activities, and include at least:]

(1) The owner or operator of a disposal facility shall have a post-closure plan. In addition, all piles and all surface impoundments from which the owner or operator intends to remove the wastes at closure are required by Regulations .11 and .12 to have post-closure plans. The plan shall be submitted with the permit application, and approved by the Secretary as part of the permit issuance. The approved post-closure plan will become a condition of any permit issued. A copy of the approved plan and all revisions to the plan shall be kept at the facility until the post-closure care period begins. This plan shall identify the activities that will be carried on after closure and the frequency of these activities, and include at least:

(a) A description of the planned monitoring activities and frequencies at which they will be performed to comply with Regulations .06 and .11 — .14 during the post-closure care period;

(b) A description of the planned maintenance activities and frequencies at which they will be performed to insure the:

(i) Integrity of the cap and final cover or other containment systems in accordance with the requirements of Regulations .11 — .14; and

(ii) Function of the facility monitoring equipment in accordance with the requirements of Regulations .06 and .11 — .14.

(2) (text unchanged)

(3) [The owner or operator of a disposal facility shall submit his post-closure plan to the Secretary at least 180 days before the date he expects to begin closure. The Secretary shall modify or approve the plan within 90 days of receipt and after providing the owner or operator and the affected public (through a newspaper notice) the opportunity to submit written comments. The plan may be modified to include security equipment maintenance under Regulation .02. If an owner or operator of a disposal facility plans to begin closure within 180 days after the effective date of these regulations, he shall submit the necessary plans on the effective date of these regulations. Any amendments to the plan under §H(2) which occur after approval of the plan shall also be approved by the Secretary before they may be implemented.] *When a permit modification is requested during the active life of the facility to authorize a change in operating plans or facility design, modification of the post-closure plan shall be requested at the same time (see COMAR 10.51.07.02J). In all other cases, the request for modification of the post-closure plan shall be made within 60 days after the change in operating plans or facility design or the events which affect his post-closure plan occur.*

I. — J. (text unchanged)

.08 Financial Requirements.

A. Except as provided in §B, the Department adopts as its regulations the federal regulations at 40 CFR 264.140 — *148, and* 264.151 as amended through the Federal Register of April 16, 1982 (volume 47, No. 74).

B. (text unchanged)

.09 Use and Management of Containers.

A. — F. (text unchanged)

G. Special Requirements for Incompatible Wastes.

(1) (text unchanged)

(2) Hazardous waste may not be placed in an unwashed container that previously held an incompatible waste or material (see Appendix V for examples) [unless Regulation .02H(2) is complied with].

(3) (text unchanged)

.10 Tanks.

A. — C. (text unchanged)

D. Inspections.

(1) The owner or operator of a tank shall inspect, where present;

(a) — (b) (text unchanged)

(c) *For uncovered tanks,* [The] *the* level of waste in the tank, at least once each operating day, to ensure compliance with §B(3);

(d) The construction materials of the tank, at least weekly, to detect corrosion *or erosion* at leaking fixtures or seams; and

(e) (text unchanged)

(2) As part of the inspection schedule required in Regulation .02F and in addition to the specific requirements of §E(1) of this regulation, the owner or operator shall develop a schedule and procedures for assessing the condition of the tank. The schedule and procedure shall be adequate to detect cracks, leaks, corrosion or erosion *protection used, rate of corrosion or erosion* which may lead to cracks or leaks, or wall thinning to less than the thickness required under Regulation .10B. Procedures for emptying a tank to allow entry and inspection of the interior shall be established when necessary to detect corrosion or erosion of the tank sides and bottom. The frequency of these assessments shall be based on the material of construction of the tank, type of corrosion or erosion observed during the previous inspections, and the characteristics of the waste being treated or stored.

(3) (text unchanged)

E. (text unchanged)

F. Special Requirements for Ignitable or Reactive Waste.

(1) Ignitable or reactive waste may not be placed in a tank, unless the:

(a) Waste is treated, rendered, or mixed before immediately after placement in the tank so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under [COMAR 10.51.02.07] *COMAR 10.51.02.10 and .12* and Regulation .02H(2) is complied with;

(b) — (c) (text unchanged)

(2) (text unchanged)

G. — H. (text unchanged)

[I. Closure. At closure, all hazardous waste and hazardous waste residues shall be removed from tanks, discharge control equipment, and discharge confinement structures.]

.11 Surface Impoundments

A. (text unchanged)

A-1. General Design Requirements.

(1) — (5) (text unchanged)

(6) The owner or operator would be exempted from the requirements of §A-1 (3) if the Secretary finds, based on a demonstration by the owner or operator, the alternate design and operating practices, together with location characteristics, will prevent the migration of the hazardous constituents, (see COMAR 10.51.05.06D) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the Secretary will consider:

(a) The nature and quantity of the wastes;

(b) The proposed alternate design and operation;

(c) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and ground water or surface water; and

(d) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(7) Any facility or facility unit subject to this regulation shall be constructed and installed as designed.

B. (text unchanged)

C. Containment Systems.

(1) (text unchanged)

(2) A liner system designed to prevent discharge into the land during the life of the surface inpoundment shall be constructed:

(a) With a highly impermeable liner system in contact with the waste which will prevent discharge of the waste or leachate [through] *into* the liner or liners during the life of the surface impoundment based on the liner or liners thickness, the saturated permability of the liner or liners and the pressure head [or] *of* waste or leachate to

which the liner or liners will be exposed, and a leachate detection, collection, and removal system beneath the liner or liners in contact with the waste to detect, contain, collect, and remove any discharge from the liner system in contact with the waste; and

(b) (text unchanged)

(3) — (4) (text unchanged)

(5) Liner systems shall be constructed:

(a) Of materials which have appropriate chemical properties and strength and of sufficient thickness to prevent failure due to pressure head, physical contact with the waste or leachate to which they are exposed, climatic conditions, and the stress of the installation [;] *and daily operations; and*

(b) On a foundation capable of providing support to the liner or liners and resistence to the pressure head above the liner or liners to prevent failure of the liner or liners due to settlement [or], *compression, or uplift.* (See "Lining of Water Impoundment and Disposal Facilities," EPA/870, September 1980 for data and discussions of liner system materials, design, construction, operation, and maintenance).

(c) Installed to cover all surrounding earth likely to be in contact with the waste or leachate.

D. (text unchanged)

E. Inspections and Testing.

(1) Liners. *For Purposes of this section, liners shall include all cover systems, membranes, sheets, and/or coatings.*

(a) — (c) (text unchanged)

(2) — (3) (text unchanged)

(4) *The requirements of §E(3) shall be followed, at a minimum, at 6-month intervals after the initial certification.*

[F. Closure and Post-closure.

(1) If the owner or operator removes all the impoundment materials or can demonstrate under **COMAR 10.51.02.03** that none of the materials remaining at any stage of removal are hazardous wastes, the impoundment is not further subject to the requirements of this chapter.

(2) For disposal surface impoundment only, if the owner or operator does not remove all the impoundment materials in §F(1), or does not make the demonstration in §F(2), he shall close the impoundment and provide post-closure care as for a landfill under Regulations .07 and .14D.

(3) For disposal surface impoundment only, if necessary to support the final cover specified in the approved closure plan, the owner or operator shall treat remaining liquids, residues, and soils by removal of liquids, drying, or other means.

(4) At closure, all hazardous waste and hazardous waste residues shall be removed from the impoundment. Any component of the containment system or any appurtenant structures or equipment (for example, discharge platforms and pipes, and baffles, skimmers, aerators, or other equipment) containing or contaminated with hazardous waste or hazardous waste residues shall be decontaminated or removed.]

F. Closure and Post-Closure Care.

(1) At closure, the owner or operator shall:

*(a) Remove or decontaminate all waste residues, contaminated containment system components (liner, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless **COMAR 10.51.02.03** applies; or he shall do §F(1) (b) and (c) if all hazardous waste is not removed or decontaminated;*

(b) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;

(c) Stabilize remaining wastes to a bearing capacity sufficient to support final cover; and

(d) Cover the surface impoundment with a final cover designed and constructed to at a minimum:

(i) Provide long-term minimization of the migration of liquids through the closed impoundment,

(ii) Function with minimum maintenance,

(iii) Promote drainage and minimize erosion or abrasion of the final cover,

(iv) Accommodate settling and subsidence so that the cover's integrity is maintained, and

(v) Have a permeability less than or equal to the premeability of any bottom liner system or natural subsoils present; and any other requirements established by the Secretary.

*(e) Apply for a permit pursuant to **COMAR 10.51.05.14** and **COMAR 10.51.07.***

*(2) If some waste residues or contaminated materials are left in place at final closure, the owner or operator shall comply with all post-closure requirements contained in **COMAR 10.51.05.07** including maintenance and monitoring throughout the post-closure care period. The owner or operator shall:*

(a) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

(b) Maintain the monitor the leak detection system, where such a system is present between double liner systems;

*(c) Maintain and monitor the ground water monitoring system and comply with all applicable requirements of **COMAR 10.51.05.06;***

(d) Prevent run-on and run-off from eroding or otherwise damaging the final cover.

(3) If an owner or operator plans to close a surface impoundment in accordance with §F (1) (a), and the impoundment does not comply with the liner requirements of §C (2) — (5), then:

*(a) The closure plan for the impoundment under **COMAR 10.51.05.07B** shall include both a plan for complying with §F (1) (a) and a contingency plan for complying with §F (1) (b) if not all contaminated subsoils can be practicably removed at closure.*

*(b) The owner or operator shall prepare a contingency post-closure plan under **COMAR 10.51.05.07G** for complying with paragraph §F(2) if not all contaminated subsoils can be practicably removed a closure.*

*(c) The cost estimates calculated under **COMAR 10.51.05.08** for closure and post-closure care of an impoundment subject to this paragraph shall include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under §F (1) (a).*

*(4) During the post-closure care period, if liquids leak into a leak detection system the owner or operator must notify the Secretary of the leak within 24 hours after detecting the leak. The Secretary will modify the permit to require compliance with the requirements of **COMAR 10.51.05.06.***

F.-1. Containment System Repairs; Contingency Plans.

(1) — (2) (text unchanged)

(3) If the surface impoundment must be removed from service as required by §H(2), the owner or operator shall:

(a) — (d) (text unchanged)

(e) Take an other necessary steps to stop or prevent catastrophic failure;

(f) Notify the Secretary of the problems within 24 hours after detecting the problem.

(4) As part of the contingency plan required in Regulation .04, the owner or operator shall specify:

(a) (text unchanged)

(b) A containment system evaluation and repair plan describing testing and monitoring techniques, procedures to be followed to evaluate the integrity of the containment system in the event of possible failure, *a schedule of actions to be taken in the event of a possible failure,* and a description of the repair techniques to be used in the event of leakage due to containment system failure or deterioration which does not require the impoundment to be removed from service.

(5)—(6) (text unchanged)

G. Special Requirements for Ignitable or Reactive Waste. Ignitable or reactive waste may not be placed in a surface impoundment, unless the:

(1) Waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive wastes under **COMAR 10.51.02 [.08] .10, [and] .12, [or]** *and .02 H(2)* is complied with; or

(2) (text unchanged)

H. (text unchanged)

.12 Waste Piles.

[A. Applicability. This regulation applies to owners and operators of facilities that treat or store hazardous waste in piles, except as otherwise provides. Alternatively, a pile of hazardous waste may be managed as a landfill under Regulation .14.**]**

A. Applicability.

*(1) These regulations apply to owners and operators of facilities that store or treat hazardous waste in piles, except as **COMAR 10.51.05.01** provides otherwise.*

*(2) The owner or operator of any waste pile that is inside or under a structure that provides protection from precipitation so that neither run-off nor leachate is generated is not subject to regulation under §§B and C-1 and **COMAR 10.51.05.06** provided that:*

(a) Liquids or materials containing free liquids are not placed in the pile;

(b) The pile is protected from surface water run-on by the structure or in some other manner;

(c) The pile is designed and operated to control dispersal of the waste by wind, when necessary, by means other than wetting; and

(d) The pile does not generate leachate through decomposition or other reactions.

[B. General Design Requirements.

(1) A waste pile shall be designed to control dispersal of the waste by wind, if necessary, or water erosion.

(2) A waste pile shall be designed to prevent discharge into the land, surface water, or ground water during the life of the pile by use of a containment system which complies with .12D.**]**

B. Design and Operating Requirements.

(1) A waste pile shall have:

(a) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the pile into the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself (but not into the adjacent subsurface soil or ground water or surface water) during the active life of the facility. The liner shall be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(iii) Installed to cover all surrounding earth likely to be in contact with the waste or leachate.

(b) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile. The Secretary will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (1 foot). The leachate collection and removal system shall be:

(i) Constructed of materials that are chemically resistant to the waste managed in the pile and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under pressures exerted by overlaying wastes, waste cover materials, and by any equipment used at the pile; and

(ii) Designed and operated to function without clogging through the scheduled closure of the waste pile.

*(2) The owner or operator will be exempted from the requirements of §B(1) if the Secretary finds, based on a demonstration by the owner or operator, that alternate design and operating practices together with location characteristics, will prevent the migration of any hazardous constituents (See **COMAR 10.51.05.06D**) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the Secretary will consider:*

(a) The nature and quantity of the wastes;

(b) The proposed alternate design and operation;

(c) The hydrogeologic setting of the facility, including attenuative capacity and thickness of the liners and soils present between the pile and ground water or surface water; and

(d) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(3) The owner or operator shall design, construct, operate and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 25-year storm.

(4) The owner or operator shall design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(5) Collection and holding facilities (for example, tanks or basins) associated with run-on and run-off control systems shall be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

(6) If the pile contains any particulate matter which may be subject to wind dispersal, the owner or operator shall cover or otherwise manage the pile to control wind dispersal.

(7) The Secretary will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this Section are satisfied.

(8) Double-Lined Piles — Exemption from Regulation .06.

(a) The owner or operator of a double-lined waste pile is not subject to regulation under Regulation .06 if the following conditions are met:

(i) The pile, including its underlying liners, shall be located entirely above the seasonal high water table.

(ii) The pile shall be underlain by two liners which are designed and constructed in a manner that prevents the migration of liquids into or out of the space between the liners. Both liners shall meet the specifications of §B(1)(a).

(iii) A leak detection system shall be designed, constructed, maintained, and operated between the liners to detect any migration of liquids into the space between the liners.

(iv) The pile shall have a leachate collection and removal system above the top liner that is designed, constructed, maintained and operated in accordance with §B(1)(b).

(b) If liquid leaks into the leak detection system, the owner or operator shall:

(i) Notify the Secretary of the leak in writing within seven days after detecting the leak; and

(ii) Within a period of time specified in the permit, remove accumulated liquid, repair or replace the liner which is leaking to prevent the migration of liquids through the liner, and obtain a certification from a qualified engineer that, to the best of his knowledge and opinion, the leak has been stopped; or

(iii) If a detection monitoring program pursuant to Regulation .06I has already been established in the permit (to be complied with only if a leak occurs), begin to comply with that program and any other applicable requirements of Regulation .06 within a period of time specified in the permit.

(c) The Secretary will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

C. (text unchanged)

[C-1. General Operating Requirements. General operating requirements are as follows:

(1) the Secretary shall specify control practices (for example, cover or frequent wetting) where necessary to ensure that wind dispersal of hazardous waste from piles is controlled;

(2) Run-on shall be deverted away from a waste pile;

(3) Leachate and run-off from a waste pile shall be collected and controlled.]

D. Containment Systems.

(1) A containment system shall be designed, constructed, maintained and operated to prevent discharge into the land, surface water, or ground water during the life of the waste pile. [The system shall consist of:] *This includes the following:*

(a) *The system shall consist of* [A] *a* leachate and run-off collection and control system, and either:

(i) — (ii) (text unchanged)

(b) (text unchanged)

(2) A waste pile *base* shall be constructed:

(a) — (b) (text unchanged)

(3) — (4) (text unchanged)

D-1. Inspections and Testing.

(1) During construction or installation of the waste pile base:

(a) Liner systems *and covers* shall be inspected for uniformity, damage and imperfections (for example, holes, cracks thin spots, and foreign materials); and

(b) Manufactured liner materials *and covers* (for example, membranes, sheets, and coatings) shall be inspected to ensure tight seams and joints and the absence of tears or blister.

(2) — (3) (text unchanged)

D.-2 Containment System Repairs, Contingency Plans.

(1) Whenever there is an indication of a possible failure of the containment system, the system shall be inspected in accordance with the provisions of the containment system evaluation and repair plan required by §D-2(4). Indications of possible failure of the containment system include liquid detected in the leachate detection system (when applicable), evidence of leakage or the potential for leakage in the base, erosion of the base, or apparent or potential deterioration of the liner and liners based on observation [of] *or* test samples [or] *of* the liner materials.

(2) — (6) (text unchanged)

E. Special Requirements for Ignitable or Reactive Waste. Ignitable or Reactive waste may not be placed in a pile, unless:

[(1) Addition of the waste to an existing pile results in the waste or mixture on longer meeting the definition of ignitable or reactive waste under COMAR 10.51.02.02 or .03, 10.51.02.07., .10 and .12, and with Regulation .02H(2).]

(1) The waste is treated, rendered, or mixed before or immediately after placement in the pile so that:

(a) The resulting waste, mixture or dissolution of materials no longer meets the definition of ignitable or reactive waste under COMAR 10.51.02.10 and .12; and

(b) Regulation .02H of COMAR 10.51.05 is complied with; or

(2) (text unchanged)

F. (text unchanged)

[G. At closure, all hazardous waste and hazardous waste residues shall be removed from the pile. Any component of the containment system containing or contaminated with hazardous waste or hazardous waste residues shall be decontaminated or removed.]

G. Closure and post-Closure Care.

(1) At closure, the owner or operator shall remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless COMAR 10.51.02.03D applies.

(2) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in §G(1), the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he shall close the facility and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills.

(3) The owner or operator of a waste pile that does not comply with the liner requirements of §B (1) (a) and is not exempt from them in accordance with §§A(2) or B(2) shall:

(a) Include in the closure plan for the pile under COMAR 10.51.05.07C both a plan for complying with §G(1) and a contingency plan for complying with §G(2) if not all contaminated subsoils can be practicably removed at closure; and

(b) Prepare a contingency post-closure plan under ***COMAR 10.51.05.07H*** *for complying with §G(2) if not all contaminated subsoils can be practicably removed at closure.*

(4) The cost estimates calculated under ***COMAR 10.51.05.08*** *for closure and post-closure care of a pile subject to §G(3) shall include the cost of complying with the contingent closure plan and the contingency post-closure plan, but are not required to include the cost of expected closure under §G(1).*

.13 (Repealed)

.13 Land Treatment.

A. Applicability. This regulation applies to owners and operators of facilities that treat or dispose of hazardous waste in land treatment units, except as ***COMAR 10.51.05.01*** *provides otherwise.*

B. Treatment Program.

(1) An owner or operator subject to this regulation shall establish a land treatment program that is designed to ensure that hazardous constituents placed in or on the treatment zone are degraded, transformed, or immobilized within the treatment zone. The Secretary will specify in the facility permit the elements of the treatment program, including:

(a) The wastes that are capable of being treated at the unit based on a demonstration under §C;

(b) Design measures and operating practices necessary to maximize the success of degradation, transformation, and immobilization processes in the treatment zone in accordance with §D(1); and

(c) Unsaturated zone monitoring provisions meeting the requirements of §I.

(2) The Secretary will specify in the facility permit the hazardous constituents that shall be degraded, transformed, or immobilized under this regulation. Hazardous constituents are constituents identified in Appendix V of ***COMAR 10.51.02*** *that are reasonably expected to be in, or derived from, waste placed in or on the treatment zone.*

(3) The Secretary will specify the vertical and horizontal dimensions of the treatment zone in the facility permit. The treatment zone is the portion of the unsaturated zone below and including the land surface in which the owner or operator intends to maintain the conditions necessary for effective degradation, transformation, or immobilization of hazardous constituents. The maximum depth of the treatment zone shall be:

(a) Not more than 1.5 meters (5 feet) from the initial soil surface; and

(b) More than 1 meter (3 feet) above the seasonal high water table.

C. Treatment Demonstration.

(1) For each waste that will be applied to the treatment zone, the owner or operator shall demonstrate, before application of the waste, that hazardous constituents in the waste can be completely degraded, transformed, or immobilized in the treatment zone.

(2) In making this demonstration, the owner or operator may use field tests, laboratory analyses, available data, or, in the case of existing units, operating data. If the owner or operator intends to conduct field tests or laboratory analyses in order to make the demonstration required under §C(1), he shall obtain a treatment or disposal permit under ***COMAR 10.51.07.02****. The Secretary will specify in this permit the testing, analytical, design, and operating requirements (including the duration of the tests and analyses, and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone, monitoring procedures, closure and clean-up activities) necessary to meet the requirements in §C(3).*

(3) Any field test or laboratory analysis conducted in order to make a demonstration under §C(1) shall:

(a) Accurately simulate the characteristics and operating conditions for the proposed land treatment unit including the:

(i) Characteristics of the waste (including the presence of Appendix V constituents in ***COMAR 10.51.02****),*

(ii) Climate in the area,

(iii) Topography of the surrounding area,

(iv) Characteristics of the soil in the treatment zone (including depth), and

(v) Operating practices to be used at the unit;

(b) Be likely to show that hazardous constituents in the waste to be tested will be completely degraded, transformed, or immobilized in the treatment zone of the proposed land treatment unit; and

(c) Be conducted in a manner that protects human health and the environment considering:

(i) The characteristics of the waste to be tested,

(ii) The operating and monitoring measures taken during the course of the test,

(iii) The duration of the test,

(iv) The volume of waste used in the test,

(v) In the case of field tests, the potential for migration of hazardous constituents to ground water or surface water.

D. Design and Operating Requirements. The Secretary will specify in the facility permit how the owner or operator will design, construct, operate, and maintain the land treatment unit in compliance with this section.

(1) The owner and operator shall design, construct, operate, and maintain the unit to maximize the degradation, transformation, and immobilization of hazardous constituents in the treatment zone. The owner or operator shall design, construct, operate, and maintain the unit in accord with all design and operating conditions that were used in the treatment demonstration under §C. At a minimum, the Secretary will specify the following in the facility permit:

(a) The rate and method of waste application to the treatment zone;

(b) Measures to control soil pH;

(c) Measures to enhance microbial or chemical reactions (for example, fertilization, tilling); and

(d) Measures to control the moisture content of the treatment zone.

(2) The owner or operator shall design, construct, operate, and maintain the treatment zone to minimize run-off of hazardous constituents during the active life of the land treatment unit.

(3) The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the treatment zone during peak discharge from at least a 25-year storm.

(4) The owner or operator shall design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(5) Collection and holding facilities (for example, tanks or basins) associated with run-on and run-off control systems shall be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system.

(6) If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator shall manage the unit to control wind dispersal.

(7) The owner or operator shall inspect the unit weekly and after storms to detect evidence of:

(a) Deterioration, malfunctions, or improper operation of run-on and run-off control systems; and

(b) Improper functioning of wind dispersal control measures.

E. — F. (Reserved)

G. Food-Chain Crops. The Secretary may allow the growth of food-chain crops in or on the treatment zone only if the owner or operator satisfies the condition of this section. The Secretary will specify in the facility permit the specific food-chain crops which may be grown.

(1) The owner or operator shall demonstrate that there is no substantial risk to human health caused by the growth of these crops in or on the treatment zone by demonstrating, before the planting of the crops, that hazardous constituents other than cadmium will not:

(a) Be transferred to the food or feed portions of the crop by plant uptake or direct contact, and will not otherwise be ingested by food-chain animals (for example, by grazing); or

(b) Occur in greater concentrations in or on the food or feed portions of crops grown on the treatment zone than in or on identical portions of the same crops grown on untreated soils under similar conditions in the same region.

(2) The owner or operator shall make the demonstration required under §G(1) before the planting of crops at the facility for all constituents identified in Appendix V of COMAR 10.51.02 that are reasonably expected to be in, or derived from, waste placed in or on the treatment zone.

(3) In making a demonstration under §G(1), the owner or operator may use field tests, greenhouse studies available data, or, in the case of existing units, operating data, and shall:

(a) Base the demonstration on conditions similar to those present in the treatment zone, including soil characteristics (for example, pH, cation exchange capacity), specific wastes, application rates, application methods, and crops to be grown; and

(b) Describe the procedures used in conducting any tests, including the sample selection criteria, sample size, analytical methods, and statistical procedures.

(4) If the owner or operator intends to conduct field tests or greenhouse studies in order to make the demonstration required under §G(1), he shall obtain a permit for conducting these activities.

(5) The owner or operator shall comply with the following conditions if cadmium is contained in wastes applied to the treatment zone:

(a) The pH of the waste and soil mixture shall be 6.5 or greater at the time of each waste application, except for waste containing cadmium at concentrations of 2 mg/kg (dry weight) or less;

(b) The annual application of cadmium from waste may not exceed 0.5 kilograms per hectare (kg/ha) on land used for production of tobacco, leafy vegetables, or root crops grown for human consumption. For other food-chain crops, the annual cadmium application rate may not exceed:

Time Period	Annual Cd Application Rate (kg/ha)
Present to June 30, 1984	2.0
July 1, 1984 to Dec. 31, 1986	1.25
Beginning Jan. 1, 1987	0.5

(c) The cumulative application of cadmium from waste may not exceed 5 kg/ha if the waste and soil mixture has a pH of less than 6.5; and

(d) If the waste and soil mixture has a pH of 6.5 or greater or is maintained at a pH of 6.5 or greater during crop growth, the cumulative application of cadmium from waste may not exceed:

(i) 5 kg/ha if soil cation exchange capacity (CEC) is less than 5 meg/100g,

(ii) 10 kg/ha if soil CEC is 5-15 meg/100g, and

(iii) 20 kg/ha if soil CEC is greater than 15 meg/100g; or

(e) Animal feed shall be the only food-chain crop produced:

(i) The pH of the waste and soil mixture shall be 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later, and this pH level shall be maintained whenever food-chain crops are grown.

(ii) There shall be an operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans. The operating plan shall describe the measures to be taken to safeguard against possible health hazards from cadmium entering the food-chain, which may result from alternative land uses.

(iii) Future property owners shall be notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food-chain crops may not be grown except in compliance with §G(5)(e).

H. (Reserved)

I. Unsaturated Zone Monitoring. An owner or operator subject to this regulation shall establish an unsaturated zone monitoring program to discharge the following responsibilities:

(1) Monitoring. The owner or operator shall monitor the soil and soil-pore liquid to determine whether hazardous constituents migrate out of the treatment zone.

(a) The Secretary will specify the hazardous constituents to be monitored in the facility permit. The hazardous constituents to be monitored are those specified under §B(2).

(b) The Secretary may require monitoring for principal hazardous constituents (PHCs) instead of the constituents specified under §B(2). PHCs are hazardous constituents contained in the wastes to be applied at the unit that are the most difficult to treat, considering the combined effects of degradation, transformation, and immobilization. The Secretary will establish PHCs if he finds, based on waste analyses, treatment demonstrations, or other data, that effective degradation, transformation, or immobilization of the PHCs will assure treatment at at least equivalent levels for the other hazardous constituents in the wastes.

(2) Installation of System. The owner or operator shall install an unsaturated zone monitoring system that includes soil monitoring using soil cores and soil-pore liquid monitoring using devices such as lysimeters. The unsaturated zone monitoring system shall consist of a sufficient number of sampling points at appropriate locations and depths to yield samples that:

(a) Represent the quality of background soil-pore liquid quality and the chemical make-up of soil that has not been affected by leakage from the treatment zone; and

(b) Indicate the quality of soil-pore liquid and the chemical make-up of the soil below the treatment zone.

(3) Establishment of Background Value. The owner or operator shall establish a background value for each hazardous constituent to be monitored under §I(1). The permit will specify the background values for each constituent or specify the procedures to be used to calculate the background values.

(a) Background soil values may be based on a one-time sampling at a background plot having characteristics similar to those of the treatment zone.

(b) Background soil-pore liquid values shall be based on at least quarterly sampling for 1 year at a background plot having characteristics similar to those of the treatment zone.

(c) The owner or operator shall express all background values in a form necessary for the determination of statistically significant increases under §I(6).

(d) In taking samples used in the determination of all background values, the owner or operator shall use an unsaturated zone monitoring system that complies with §I(2)(a).

(4) The owner or operator shall conduct soil monitoring and soil-pore liquid monitoring immediately below the treatment zone. The Secretary will specify the frequency and timing of soil and soil-pore liquid monitoring in the facility permit after considering the frequency, timing, and rate of waste application, and the soil permeability. The owner or operator shall express the results of soil and soil-pore liquid monitoring in a form necessary for the determination of statistically significant increases under §I(6).

(5) The owner or operator shall use consistent sampling and analysis procedures that are designed to ensure sampling results that provide a reliable indication of soil-pore liquid quality and the chemical make-up of the soil below the treatment zone. At a minimum, the owner or operator shall implement procedures and techniques for:

(a) Sample collection;

(b) Sample preservation and shipment;

(c) Analytical procedures; and

(d) Chain of custody control.

(6) Background Values. The owner or operator shall determine whether there is a statistically significant change over background values for any hazardous constituent to be monitored under §I(1) below the treatment zone each time he conducts soil monitoring and soil-pore liquid monitoring under §I(4).

(a) In determining whether a statistically significant increase has occurred, the owner or operator shall compare the value of each constituent, as determined under §I(4), to the background value for that constituent according to the statistical procedure specified in the facility permit under this paragraph.

(b) The owner or operator shall determine whether there has been a statistically significant increase below the treatment zone within a reasonable time period after completion of sampling. The Secretary will specify that time period in the facility permit after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of soil and soil-pore liquid samples.

(c) The owner or operator shall determine whether there is a statistically significant increase below the treatment zone using a statistical procedure that provides reasonable confidence that migration from the treatment zone will be identified. The Secretary will specify a statistical procedure in the facility permit that he finds:

(i) Is appropriate for the distribution of the data used to establish background values; and

(ii) Provides a reasonable balance between the probability of falsely identifying migration from the treatment zone and the probability of failing to identify real migration from the treatment zone.

(7) If the owner or operator determines, pursuant to §I(6), that there is a statistically significant increase of hazardous constituents below the treatment zone, he shall:

(a) Notify the Secretary of this finding in writing within 7 days. The notification shall indicate what constituents have shown statistically significant increases.

(b) Within 90 days, submit to the Secretary an application for a permit modification to modify the operating practices at the facility in order to maximize the success of degradation, transformation, or immobilization processes in the treatment zone.

(8) If the owner or operator determines, pursuant to §I(6), that there is a statistically significant increase of hazardous constituents below the treatment zone, he may demonstrate that a source other than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. While the owner or operator may make a demonstration under this paragraph in addition to, or instead of, submitting a permit modification application under §I(7)(b), he is not relieved of the requirement to submit a permit modification application within the time specified in §I(7)(b) unless the demonstration made under this paragraph successfully shows that a source other than the regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. In making a demonstration under this paragraph, the owner or operator shall:

(a) Notify the Secretary in writing within seven days of determining a statistically significant increase below the treatment zone that he intends to make a determination under this paragraph;

(b) Within 90 days, submit a report to the Secretary demonstrating that a source other than the regulated units caused the increase or that the increase resulted from error in sampling, analysis, or evaluation;

(c) Within 90 days, submit to the Secretary an application for a permit modification to make any appropriate changes to the unsaturated zone monitoring program at the facility; and

(d) Continue to monitor in accord with the unsaturated zone monitoring program established under this section.

J. Recordkeeping. The owner or operator shall include hazardous waste application dates and rates in the operating record required under **COMAR 10.51.05.05D.**

K. Closure and Post-closure Care.

(1) During the closure period the owner or operator shall:

(a) Continue all operations (including pH control) necessary to maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone as required under §D(1), except to the extent these measures are inconsistent with §K(1)(h);

(b) Continue all operations in the treatment zone to minimize run-off of hazardous constituents as required under §D(2);

(c) Maintain the run-on control system required under §D(3);

(d) Maintain the run-off management system required under §D(4);

(e) Control wind dispersal of hazardous waste required under §D(6);

(f) Continue to comply with any prohibition or conditions concerning growth of food-chain crops under §G;

(g) Continue unsaturated zone monitoring in compliance with §I, except that soil-pore liquid monitoring may be terminated 90 days after the last application of waste to the treatment zone; and

(h) Establish a vegetative cover on the portion of the facility being closed at such time that the cover does not substantially impede degradation, transformation, or immobilization of hazardous constituents in the treatment zone. The vegetative cover shall be capable of maintaining growth without extensive maintenance.

(2) For the purpose of complying with COMAR 10.51.05.07F, when closure is completed the owner or operator may submit to the Secretary certification by an independent qualified soil scientist, instead of an independent registered professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

(3) During the post-closure care period the owner or operator shall:

(a) Continue all operations, including pH control, necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone to the extent that these measures are consistent with other post-closure care activities;

(b) Maintain a vegetative cover over closed portions of the facility;

(c) Maintain the run-on control system required under §D(3);

(d) Maintain the run-off management system required under §D(4);

(e) Control wind dispersal of hazardous waste if required under §D(6);

(f) Continue to comply with any prohibitions or conditions concerning growth of food-chain crops under §G; and

(g) Continue unsaturated zone monitoring in compliance with §I except that soil-pore liquid monitoring may be terminated 90 days after the last application of waste to the treatment zone.

(4) The owner or operator is not subject to regulation under §K(1)(h) and (3) if the Secretary finds that the level of hazardous constituents in the treatment zone soil does not exceed the background value of those constituents by an amount that is statistically significant when using the test specified in §K(4)(c). The owner or operator may submit a demonstration to the Secretary at any time during the closure or post-closure periods. For the purposes of this paragraph:

(a) The owner or operator shall establish background soil values and determime whether there is a statistically significant increase over those values for all hazardous constituents specified in the facility permit under §B(2). This includes the following:

(i) Background soil values may be based on a one-time sampling of a background plot having characteristics similar to those of the treatment zone.

(ii) The owner or operator shall express background values and values for hazardous constituents in the treatment zone in a form necessary for the determination of statistically significant increases under §K(4)(c).

(b) In taking samples used in the determination of background and treatment zone values, the owner or operator shall take samples at a sufficient number of sampling points and at appropriate locations and depths to yield samples that represent the chemical make-up of soil that has not been affected by leakage from the treatment zone and the soil within the treatment zone, respectively.

(c) In determining whether a statistically significant increase has occurred, the owner or operator shall compare the value of each constituent in the treatment zone to the background value for that constituent using a statistical procedure that provides reasonable confidence that constituent presence in the treatment zone will be identified. The owner or operator shall use a statistical procedure that:

(i) Is appropriate for the distribution of the data used to establish background values; and

(ii) Provides a reasonable balance between the probability of falsely identifying hazadrous constituent presence in the treatment zone and the probability of failing to identify real presence in the treatment zone.

(5) The owner or operator is not subject to regulation under COMAR 10.51.05.06 if the Secretary finds that the owner or operator satisfied §K(4) and if unsaturated zone monitoring under §I indicates that hazardous constituents have not migrated beyond the treatment zone during the active life of the land treatment unit.

L. Special Requirements for Ignitable or Reactive Waste. The owner or operator may not apply ignitable or reactive waste to the treatment zone unless the waste is:

(1) Immediately incorporated into the soil so that:

(a) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under COMAR 10.51.02.10 or .12; and

(b) COMAR 10.51.05.02H(2) is complied with; or

(2) Managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

M. Special Requirements for Incompatible Wastes. The owner or operator may not place incompatible wastes, or incompatible wastes and materials (see Appendix V for examples), in or on the same treatment zone, unless COMAR 10.51.05.02H(2) is complied with.

.14 (Repealed)

.14 Landfills.

A. Applicability. The regulations in this chapter apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as COMAR 10.51.05.01 provides otherwise.

B. Design and Operating Requirements.

(1) A landfill shall have, or be:

(a) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the landfill to the adjacent subsurface soil or ground water or surface water at any time during the active life, including the closure period, of the landfill. The liner shall be constructed of materials that prevent wastes from passing into the liner during the active life of the facility. The liner shall be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients, including static

head external hydrogeologic forces, physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift;

(iii) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

(iv) Located entirely above natural seasonal high water table. Minimal distance will be specified by the Secretary in the permit.

(b) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the landfill. The Secretary will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (1 foot). The leachate collection and removal system shall be:

(i) Constructed of materials that are chemically resistant to the waste managed in the landfill and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and by any equipment used at the landfill; and

(ii) Designed and operated to function without clogging through the scheduled closure of the landfill.

(c) Located in a geohydrologic setting which is compatible with hazardous waste land disposal as determined by the Secretary. Compatability criteria shall include but not be limited to the:

(i) Attenuative capacity of the in-situ soils;

(ii) Hydraulic conductivity of the in-situ soils;

(iii) Thickness and classification of in-situ soils; and

(iv) Water table surface or potentiometric surface of each aquifer within 50 feet of the facility boundaries.

(2) The owner or operator will be exempted from the requirements of §B(1) if the Secretary finds, based on a demonstration by the owner or operator, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see ***COMAR 10.51.05.06D****) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the Secretary will consider:*

(a) The nature and quantity of the wastes;

(b) The proposed alternate design and operation;

(c) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the landfill and ground water or surface waters; and

(d) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(3) The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 25-year storm.

(4) The owner or operator shall design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(5) Collection and holding facilities (for example, tanks or basins) associated with run-on and run-off control systems shall be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

(6) If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator shall cover or otherwise manage the landfill to control wind dispersal.

(7) The Secretary will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

C. Monitoring and Inspection.

(1) During construction or installation, liners (except in the case of existing portions of landfills exempt from §B(1) and cover systems (for example, membranes, sheets, or coatings) shall be inspected for uniformity, damage, and imperfections (for example, holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:

(a) Synthetic liners and covers shall be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

(b) Soil-based and admixed liners and covers shall be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(2) While a landfill is in operation, it shall be inspected weekly and after storms to detect evidence of any of the following:

(a) Deterioration, malfunctions, or improper operation of run-on and run-off control systems;

(b) The presence of liquids in leak detection systems;

(c) Proper functioning of wind dispersal control system, when present; and

(d) The presence of leachate in and proper functioning of leachate collection and removal systems, when present.

D. — H. (Reserved)

I. Surveying and Recordkeeping. The owner or operator of a landfill shall maintain the following items in the operating record required under ***COMAR 10.51.05.05D****:*

(1) On a map, the exact location and dimensions, including depth of each cell with respect to permanently surveyed benchmarks; and

(2) The contents of each cell and the approximate location of each hazardous waste type within each cell.

J. Closure and Post-closure Care.

(1) At final closure of the landfill or upon closure of any cell the owner or operator shall cover the landfill or cell with a final cover designed and constructed to:

(a) Provide long-term minimization of migration of liquids through the closed landfill;

(b) Function with minimum maintenance;

(c) Promote drainage and minimize erosion or abrasion of the cover;

(d) Accommodate settling and subsidence so that the cover's integrity is maintained; and

(e) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(2) After final closure, the owner or operator shall comply with all post-closure requirements contained in ***COMAR 10.51.05.07F. — I.****, including maintenance and monitoring throughout the post-closure care period. The owner or operator shall:*

(a) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

(b) Continue to operate the leachate collection and removal system:

(i) During post-closure period, or

(ii) Until leachate is no longer detected;

(c) Maintain and monitor the ground water monitoring system and comply with all other applicable requirements of COMAR 10.51.05.06;

(d) Prevent run-on and run-off from eroding or otherwise damaging the final cover; and

(e) Protect and maintain surveyed benchmarks used in complying with §I.

K. [Reserved]

L. Special Requirements for Ignitable or Reactive Waste. Except as provided in §L(2), ignitable or reactive waste may not be placed in a landfill, unless the waste is treated, rendered, or mixed before or immediately after placement in a landfill so that:

(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under COMAR 10.51.02.10 or .12; and

(2) COMAR 10.51.02H(2) is complied with.

M. Special Requirements for Incompatible Wastes. Incompatible wastes, or incompatible wastes and materials, (See Appendix V for example) may not be placed in the same landfill cell, unless COMAR 10.51.05.02H(2) is complied with.

N. Special Requirements for Liquid Waste. Bulk or non-containerized liquid waste or waste containing free liquids may not be placed in a landfill.

O. Special Requirements for Containers. Unless the containers are very small, (such as ampules) the containers shall be crushed, shredded, or similarly reduced in volume to the maximum practical extent before burial in the landfill.

.15 Incinerators.

A. Applicability. This regulation applies to owners and operators of *existing* facilities that treat hazardous waste in incinerators, except as Regulation .01 otherwise provides. All facilities subject to this regulation shall submit a permit application within 6 months of promulgation of COMAR 10.51.05.15-1. Upon issuance of a permit persuant to COMAR 10.51.05.15-1, applicability with this regulation ceases.

B. — E. (text unchanged)

.15-1 Thermal Destruction of Hazardous Waste.

A. Definitions.

(1) As used in this regulation and in COMAR 10.51.07.05, the following terms have the meanings indicated:

(2) "Acute hazardous waste" means hazardous waste that is classified pursuant to COMAR 10.51.02.17 as acute hazardous waste, except for quantities that satisfy the small quantity exclusion in COMAR 10.51.02.05C.

(3) "Electric generating station" means a fuel burning facility constructed or operated by an electric company that provides electric energy for public consumption and whose activities are controlled by the Public Service Commission under Article 78, Annotated Code of Maryland.

(4) "Installation" means any article, machine, equipment, or other contrivance, including, but not limited to, emission control equipment, processing equipment, manufacturing equipment, fuel burning equipment, incinerators, or any equipment or construction, capable of generating, causing, or reducing emissions, as defined in COMAR 10.18.01.01I.

(5) "Installation that has an air quality permit to operate" means as installation subject to COMAR 10.18.02.03B(1) for which an annual air quality permit to operate has been issued.

(6) "Small quantity hazardous waste" means hazardous waste that satisfies the small quantity exclusion at COMAR 10.51.02.05(c), except for polychlorinated biphenals (PCB's).

B. Applicability.

(1) This regulation applies to owners and operators of installations used to thermally destroy hazardous waste, except as Regulation .01 provides otherwise.

(2) After consideration of the waste analysis included with the permit application, the Department, in establishing the permit conditions, will exempt the applicant from all requirements of COMAR 10.51.05.15-1 except §§C, D, F(5), and L if the:

(a) Department finds that the waste to be burned is:

(i) Listed as a hazardous waste in COMAR 10.51.02.14 — .17 solely because it is ignitable (Hazard Code I), corrosive (Hazard Code C), or both;

(ii) Listed as a hazardous waste in COMAR 10.51.02.14 — .17 solely because it is reactive (Hazard Code R) for characteristics other than those listed in COMAR 10.51.02.12A(4) and (5), and will not be burned when other hazardous wastes are present in the combustion zone;

(iii) A hazardous waste solely because it possesses the characteristics of ignitability, corrosivity, or both, as determined by the test for characteristics of hazardous wastes under COMAR 10.51.02.10 — .11; or

(iv) A hazardous waste solely because it possesses any of the reactivity characteristics described by COMAR 10.51.02.12A(1) — (3) and (6) — (8), and will not be burned when other hazardous wastes are present in the combustion zone; and

(b) Waste analysis shows that the waste contains none of the hazardous constituents listed in COMAR 10.51.02, Appendix V, which would reasonably be expected to be in the waste.

(3) If the waste to be burned is one which is described by §B(2)(a)(i), (ii), (iii), or (iv) and contains insignificant concentration of the hazardous constituents listed in COMAR 10.51.02, Appendix V, then the Department may, in establishing permit conditions, exempt the applicant from all requirements of this regulation except §§D, F, and L, after consideration of the waste analysis included with the permit application, unless the Department finds that the waste will pose a threat to human health and the environment when burned in an incinerator.

(4) The owner or operator of a hazardous waste incinerator may conduct trial burns subject only to the requirements of COMAR 10.51.07.02P.

C. General Requirements.

(1) Notwithstanding any other provision of this subtitle, a person who thermally destroys hazardous waste is subject to the requirements of this regulation. A person shall thermally destroy hazardous waste in accordance with the provisions of §C(2) — (4), below.

(2) Except for small quantity hazardous waste, the following hazardous waste shall be thermally destroyed only in a hazardous waste incinerator that has been permitted under COMAR 10.51.07.02 and .03 to thermally destroy hazardous waste:

(a) Acute hazardous waste.

(b) Hazardous waste, with a heating value of less than 6,000 BTU/lb.

(c) Hazardous waste with a heating value of 6,000 BTU's or greater, not used as a fuel for heat energy recovery, and containing material listed in ***COMAR 10.51.02****, Appendix V.*

(d) Hazardous waste with a heating value of 6,000 BTU/lb. or greater and mixed with a hazardous waste with a heating value of less than 6,000 BTU/lb. unless the:

(i) Applicant demonstrates to the satisfaction of the Department that it is unnecessarily costly to separate the waste; and

(ii) Hazardous waste with a heating value of 6,000 BTU/lb. or greater does not contain more than 1 percent by volume of the hazardous waste with a heating value of less than 6,000 BTU/lb. except that if the hazardous waste with a heating value of less than 6,000 BTU/lb. is primarily water the volume may be greater than 1 percent. However, the Department reserves the right to limit the amount of water present in the hazardous waste to be thermally destroyed such that the flame temperature is not reduced to a level where incomplete combustion of the hazardous waste may be expected.

(e) Hazardous waste or hazardous waste mixtures that the Department determines will create a public health or environmental hazard.

(3) All other hazardous waste may be thermally destroyed in a hazardous waste incinerator permitted under ***COMAR 10.51.07.02*** *and* ***.03****, an electric generating station with a Limited Facility Permit under* ***COMAR 10.51.07.05****, or any other installation that has an air quality permit to operate and a Limited Facility Permit under* ***COMAR 10.51.07.05****.*

(4) The requirements of the Federal Toxic Substances Control Act, 15 U.S.C. 2505(e) (TOSCA), and regulations adopted under that Act, 40 C.F.R. §761, shall take precedence over the requirements of this regulation concerning polychlorinated biphenyls (PCBs), to the extent that there is any inconsistency between them.

D. Waste Analysis.

(1) As a portion of the trial burn plan required by ***COMAR 10.51.07.02P(2)****, or with the permit application, the owner or operator shall include an analysis of the waste feed sufficient to provide all information required by* ***COMAR 10.51.07.02P(2)****. Owners or operators of new incinerators shall provide the information required by* ***COMAR 10.51.07.02P(3)*** *to the greatest extent possible.*

(2) Throughout normal operation the owner or operator shall conduct sufficient waste analysis to verify that waste feed to the hazardous waste incinerator is within the physical and chemical composition limits specified in his permit under §H(2).

E. Principal Organic Hazardous Constituents (POHCs).

(1) Principal Organic Hazardous Constituents (POHCs) in the waste feed shall be treated to the extent required by the performance standard of §F.

(2) One or more POHCs will be specified in the facility's permit from among those constituents listed in ***COMAR 10.51.02****, Appendix V, for each waste feed to be burned. This specification will be based on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses and trial burns or alternative data submitted with the facility's permit application. Organic constituents which represent the greatest degree of difficulty of incineration will be those most likely to be designated as POHCs. Constituents are more likely to be designated as POHCs if they are present in large quantities or concentrations in the waste.*

(3) Trial POHCs will be designated for performance of trial burns in accordance with the procedure specified in ***COMAR 10.51.07.02P(2)*** *for obtaining trial burn permits.*

F. Performance Standards. A hazardous waste incinerator burning hazardous waste shall be designed, constructed, and maintained so that when operated in accordance with operating requirements specified under §H it will meet the following performance standards:

(1) It shall achieve a destruction and removal efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC) designated under §E in its permit for each waste feed. DRE is determined for each POHC from the following equation:

$$DRE = \frac{(W_{in} - W_{out}) \times 100 \text{ percent}}{W_{in}}$$

where:

W_{in} *= Mass feed rate of one principal organic hazardous constituent (POHC) in the waste stream feeding the hazardous waste incinerator; and*

W_{out} *= Mass emission rate of the same POHC present in exhaust emissions before release to the atmosphere.*

(2) When producing stack emissions of more than 1.8 kilograms per hour (4 pounds per hour) of hydrogen chloride (HC1), it shall control HC1 emissions such that the rate of emission is not greater than the larger of either 1.8 kilograms per hour or 1 percent of the HC1 in the stack gas prior to entering any pollution control equipment.

(3) It may not emit particulate matter in excess of 68.7 milligrams per dry standard cubic meter (0.030 grains per dry standard cubic foot) when corrected as provided for at ***COMAR 10.18.08.05****.*

(4) Visible Emissions Standard.

(a) A person may not cause or permit the discharge of emissions from a hazardous waste incinerator that violate the visible emissions standards in ***COMAR 10.18.08.04****.*

(b) A person may apply for an exception to the visible emission standard in §F(4)(a), above, using the procedures in ***COMAR 10.18.01.08****.*

(5) As provided in ***COMAR 10.18.08****, hazardous waste incinerators are subject to all applicable substantive requirements of* ***COMAR 10.18*** *and shall also be subject to the approval requirements of* ***COMAR 10.18.02.03A*** *for New Sources Impacting on a Nonattainment Areas (NSINA's) and Prevention of Significant Deterioration (PSD) Sources.*

(6) For purposes of permit enforcement, compliance with the operating requirements specified in the permit under §H will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the performance requirements of this section may be information justifying modification, revocation, or reissuance of a permit under ***COMAR 10.51.07.02J*** *or* ***.03****.*

G. Hazardous Waste Incinerator Permits.

(1) The owner or operator of a hazardous waste incinerator shall burn only wastes specified in his permit and only under operating conditions specified for those wastes under §H except:

(a) In approved trial burns under ***COMAR 10.51.07.02P(2)****; or*

(b) Under exemptions created by §B.

(2) Other hazardous wastes shall be burned only after operating conditions have been specified in a new permit or a permit modification as applicable. Operating requirements for new wastes shall be based on either trial burn results or alternative data included with a permit application.

(3) The permit for a new hazardous waste incinerator shall establish appropriate conditions for each of the applicable requirements of this section, including but not limited to allowable waste feeds and operating conditions necessary to meet the requirements of §H, sufficient to comply with the following standards:

(a) For the period beginning with initial introduction of hazardous waste to the incinerator and ending with initiation of the trial burn, and only for the minimum time required to establish operating conditions required in §G(3)(b), not to exceed a duration of 720 hours operating time for incineration of hazardous waste, the operating requirements shall be those most likely to ensure compliance with the performance standards of §F, based on the Departments engineering judgment. The Department may extend the duration of this period once for up to 720 additional hours when good cause for the entrance is demonstrated by the applicant.

(b) For the duration of the trial burn, the operating requirements shall be sufficient to demonstrate compliance with the performance standards of §F and shall be in accordance with the approved trial burn plan.

(c) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the Department, the operating requirements shall be those most likely to ensure compliance with the performance standards of §F based on the Department's engineering judgment.

(d) For the remaining duration of the permit, the operating requirements shall be those demonstrated, in a trial burn or by alternative data specified in the permit application, as sufficient to ensure compliance with the performance standards of §F.

H. Operating Requirements.

(1) A hazardous waste incinerator shall be operated in accordance with operating requirements specified in the permits. These will be specified on a case-by-case basis as those demonstrated (in a trial burn or in alternative data as specified in §G(2) and included with a facility's permit application) to be sufficient to comply with the performance standards of §F.

(2) Each set of operating requirements will specify the composition of the waste feed, including acceptable variations in the physical or chemical properties of the waste feed which do not affect compliance with the performance requirements of §F to which the operating requirements apply. For such waste feed, the permit will specify acceptable operating limits including the following conditions:

(a) Carbon monoxide (CO) level in the stack exhaust gas;

(b) Waste feed rate;

(c) Combustion temperature;

(d) An appropriate indicator of combustion gas velocity;

(e) Allowable variations in incinerator system design or operating procedures; and

(f) Such other operating requirements as are necessary to ensure that the performance standards of §F are met.

(3) During start-up and shut-down of a hazardous waste incinerator, hazardous waste, except wastes exempted in accordance with §B, may not be fed into the incinerator unless the incinerator is operating within the conditions of operation (temperature air feed rate, etc.) specified in the permit.

(4) Fugitive emissions from the combustion zone shall be controlled by:

(a) Keeping the combustion zone totally sealed against fugitive emissions;

(b) Maintaining a combustion zone pressure lower than atmospheric pressure; or

(c) An alternate means of control demonstrated (with the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

(5) A hazardous waste incinerator shall be operated with a functioning system to automatically cut off waste feed to the incinerator when operating conditions deviate from limits established under §H (1).

(6) A hazardous waste incinerator shall cease operation when changes in waste feed, incinerator design, or operating conditions exceed limits designated in its permit.

I. Monitoring and Inspections.

(1) The owner or operator shall conduct, as a minimum, the following monitoring while incinerating hazardous waste:

(a) Combustion temperature, waste feed rate, and the indicator of combustion gas velocity specified in the facility permit shall be monitored on a continuous basis.

(b) CO shall be monitored on a continuous basis at a point in the hazardous waste incinerator downstream of the combustion zone and before release to the atmosphere.

(c) Upon release by the Department, sampling and analysis of the waste and exhaust emissions shall be conducted to verify that the operating requirements established in the permit achieve the performance standards of §F.

(2) The hazardous waste incinerator and associated equipment (pumps, valves, conveyors, pipes, etc.) shall be subjected to thorough visual inspection, at least daily, for leaks, spills, fugitive emissions, and signs of tampering.

(3) The emergency waste feed cutoff system and associated alarms shall be tested at least weekly to verify operability, unless the applicant demonstrates to the Department that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, operational testing shall be conducted at least monthly.

(4) This monitoring and inspection data shall be recorded and the records shall be placed in the operating log required by ***COMAR 10.51.05.05D.***

J. — K. (Reserved)

L. Closure. At closure, the owner or operator shall remove all hazardous waste and hazardous waste residues (including but not limited to ash, scrubber waters, and scrubber sludges) from the incinerator site.

M. Existing Hazardous Waste Incinerators. Not later than six months after the effective date of this regulation, the owner or operator of any existing hazardous waste incinerator shall submit a completed permit application for that hazardous waste incinerator, as provided for in ***COMAR 10.51.07.02****, or cease to operate the incinerator.*

.16 Thermal Treatment ***and Open Burning.***

A. Applicability. This regulation applies to owners and operators of facilities that thermally treat hazardous waste [in devices other than incinerators] *other than by thermal*

destruction [, except as Regulation .01 otherwise provides] *and that cause or permit the open burning of hazardous waste.* Thermal [treatment in incinators] destruction of hazardous waste is subject to the requirements of Regulations .15 *or* .15-1.

B. — F. (text unchanged)

.18 Underground Injection Control.

A person may not dispose of hazardous waste by underground injection (As the term "underground injection" is defined at **COMAR 10.50.04** and 40 C.F.R. 143.3).

Appendix I — Appendix III (text unchanged)

Appendix IV (Repealed)

Appendix IV

Cochran's Approximation to the Behrens-Fisher Students' T-test

Using all the available background data (^{n}b readings), calculate the background mean (^{X}b) and background variance $^{s}b^{2}$. For the single monitoring well under investigation (^{n}m reading), calculate the monitoring mean (^{X}m) and monitoring variance ($^{s}m^{2}$). For any set of data ($^{X}1, ^{X}2 \ldots ^{X}n$) the mean is calculated by:

$$X = \frac{X_1 + X_2 \ldots + X_n}{n}$$

and the variance is calculated by:

$$s^2 = \frac{(X_1 - \overline{X})^2 + (X_2 - \overline{X})^2 \ldots + (X_n - \overline{X})^2}{n - 1}$$

where "n" denotes the number of observations in the set of data.

The t-test uses these data summary measures to calculate a t-statistic (t) and a comparison t-statistic (^{t}c). The t* value is compared to the ^{t}c value and a conclusion reached as to whether there has been a statistically significant change in any indicator parameter.*

The t-statistic for all parameters except pH and similar monitoring parameters is:

$$t^* = \frac{X_m - X_b}{\frac{^{s}m^2}{n_m} + \frac{^{s}b^2}{n_b}}$$

If the value of this t-statistic is negative then there is no significant difference between the monitoring data and background data. It should be noted that significantly small negative values may be indicative of a failure of the assumption made for test validity or errors have been made in collecting the background data.

The t-statistic (^{t}c), against which t will be compared, necessitates finding ^{t}B and ^{t}m from standard (one-tailed) tables where, ^{t}B = t-tables with (^{n}b - 1) degrees of freedom, at the 0.05 level of significance.*

^{t}m = t-tables with (^{n}m - 1) degrees of freedom, at the 0.05 level of significance.

Finally, the special weighting ^{W}B and ^{W}M are defined as:

$$W_B = \frac{^{s}B^2}{n_B} \quad \text{and} \quad W_m = \frac{^{s}m^2}{n_m}$$

and so the comparison t-statistic is:

$$t_c = \frac{W_B t_B + W_m t_m}{W_B + W_m}$$

The t-statistic (t) is now compared with the comparison t-statistic (^{t}c) using the following decision-rule:*

If t is equal to or larger than ^{t}c, then conclude that there most likely has been a significant increase in this specific parameter.*

If t is less than ^{t}c, then conclude that most likely there has not been a change in this specific parameter.*

The t-statistic for testing pH and similar monitoring parameters is constructed in the same manner as previously described except the negative sign (if any) is discarded and the caveat concerning the negative value is ignored. The standard (two tailed) tables are used in the construction ^{t}c for pH and similar monitoring parameters.

It t is equal or larger than ^{t}c, then conclude that there most likely has been a significant increase (if the initial t* had been negative, this would imply a significant decrease). If t* is less than ^{t}c, then conclude that there most likely has been no change.*

A further discussion of the test may be found in Statistical Methods (6th Edition, Section 4.14) by G.W. Snedecor and W.G. Cochran, or Principles and Procedures of Statistics (1st Edition, Section 5.8) by R.G.D. Steel and J.H. Torrie.

STANDARD T-TABLES
0.05 LEVEL OF SIGNIFICANCE

Degrees of Freedom	*t-values (one-tail)*	*t-values (two-tail)*
1	6.314	12.706
2	2.920	4.303
3	2.353	3.182
4	2.132	2.776
5	2.015	2.571
6	1.943	2.447
7	1.895	2.365
8	1.860	2.306
9	1.833	2.262
10	1.812	2.228
11	1.796	2.201
12	1.782	2.179
13	1.771	2.160
14	1.761	2.145
15	1.753	2.131
16	1.746	2.120
17	1.740	2.110
18	1.734	2.101
19	1.729	2.093
20	1.725	2.086
23	1.714	2.069
24	1.711	2.064
25	1.708	2.060
30	1.697	2.042
40	1.684	2.021

Appendix V (text unchanged)

Appendix VI — Appendix XIII (Repealed)

10.51.07 Permits for [DHS] *CHS* Facilities

.01 Permit Required.

A. — B. (text unchanged)

C. A permit may be issued or denied for one or more units at a facility without simultaneously issuing or denying a permit to all of the units at the facility.

.02 Permit Procedure.

A. Application.

(1) — (3) (text unchanged)

(4) Permit Information. All applicants, *using the application form provided by the Department,* shall provide the following information to the Secretary [:]. *A duplicate of each application shall be submitted at the same time to the EPA. Information shall be signed in accordance with §A (1), (2) and §B (4).*

(a) — (g) (text unchanged)

[(h) Recordkeeping. Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under §A(4)(e), above, for a period of at least 3 years from the date the application is signed.]

[(i)]*(h)* — [(q)]*(p)* (text unchanged)

[(r)]*(q)* A copy of the waste analysis plan required by COMAR 10.51.05.*02D.*

[(s)]*(r)* A description of the security procedures and equipment required by COMAR 10.51.05.*02E.*

[(t)]*(s)* A copy of the general inspection schedule required by COMAR 10.51.05. *02F*(2). *Include, when applicable, as part of the inspection schedule, specific requirements in COMAR 10.51.05.09E, 10.51.05.10D, 10.51.05.11E, 10.51.05.12D-1, 10.51.05.13D, and 10.51.05.14C.*

[(u)]*(t)* A justification of any request for a waiver or waivers of the preparedness and prevention requirements of COMAR 10.51.05.*03.*

[(v)]*(u)* A copy of the contingency plan required by COMAR 10.51.05.*04.*

[(w)]*(v)* — [(cc)]*(bb)* (text unchanged)

[(dd)]*(cc)* A copy of the closure plan and, when applicable, the post-closure plan required by COMAR 10.51.05.07*H. Include, when applicable, as part of the plan, specific requirements in COMAR 10.51.05.09I, 10.51.05.10I, 10.51.05.11F, 10.51.05.12G, 10.51.05.13K, and 10.51.05.14J.*

[(ee)]*(dd)* For existing facilities, documentation that a notice has been placed in the deed or appropriate alternate instrument as required by COMAR 10.51.05.07*J.*

[(ff)]*(ee)* The most recent closure cost estimate for the facility prepared in accordance with 40 CFR 264.[143] *142* plus a copy of the financial assurance mechanism adopted in compliance with 40 CFR 264. [142] *143.*

[(gg)]*(ff)* — [(hh)]*(gg)* (text unchanged)

[(ii)]*(hh)* When appropriate, proof of coverage by a State financial mechanism in compliance with 40 CFR 264.[140 — 151]*149 — .150.*

[(jj)]*(ii)* (text unchanged)

(i) — (ix) (text unchanged)

(x) Buildings, treatment, storage, or disposal operations, or other structures (recreation areas, runoff control systems, access and internal roads, storm sanitary, and process sewerage systems, loading and unloading areas, fire control facilities, etc).

(xi) Barriers for drainage [on] *or* flood control,

(xii) (text unchanged)

[(kk)]*(jj)* (text unchanged)

(5) Specific Information Requirements. The following additional information is required from owners or operators of specific types of hazardous waste management facilities that are used or to be used for storage or treatment:

(a) For facilities that store containers of hazardous waste, except as otherwise provided in COMAR 10.51.05.09:

(i) (text unchanged)

(ii) Sketches, drawings, or data demonstrating compliance with *COMAR 10.51.05.09F* (location or buffer zone and containers holding ignitable or reactive wastes) and COMAR 10.51.05.09G (3) (location of incompatible wastes), when applicable.

(iii) (text unchanged)

(b) (text unchanged)

(c) For facilities that store or treat hazardous waste in surface impoundments, except as otherwise provided in COMAR 10.51.05.11., the owner or operator shall submit detailed plans and specifications accompanied by an engineering report which shall collectively include the information itemized in sub-paragraphs (i) — (x). For new facilities, the plans and specifications shall be in sufficient detail to provide complete information to a contractor hired to build the facility even if the owner or operator intends to construct the facility without hiring a contractor. For existing facilities, comparable detail shall be provided, but the form of presentation need not assume contractor construction except to the extent that the facility will be modified.

(i) (text unchanged)

(ii) Detailed drawings of the structure which is or will be provided to immediately stop flow into the impoundment to comply with COMAR 10.51.05.11A-1(2), or if no structure is needed to comply with [COMAR 10.51.05H(3)(a)]*COMAR 10.51.05.11(F-1,3)(a),* a description of the means by which waste additions will be stopped.

(iii) — (xi) (text unchanged)

(xii) A description of the procedure to be used for removing a surface impoundment from service, as required under COMAR 10.51.05.11F-1 (2) and (3). This information should be included in the contingency plan submitted under §A(4)(v).

(xiii) A description of how hazardous waste residues and contaminated materials will be removed from the unit at closure, as required under COMAR 10.51.05.11F(1)(a). For any wastes not to be removed from the unit upon closure, the owner or operator must submit detailed plans and an engineering report describing how COMAR 10.51.05.11F(1)(b) and (2) will be complied with. This information should be included in the closure plan, and when applicable, the post-closure plan submitted under COMAR 10.51.07.02A(4) (dd).

(xiv) If ignitable or reactive wastes are to be placed in a surface impoundment, an explanation of how COMAR 10.51.05.11G will be complied with.

(xv) If compatible wastes, or incompatible wastes and materials will be placed in a surface impoundment, an explanation of how COMAR 10.51.05.11H will be complied with.

(d) For facilities that store or treat hazardous waste in waste piles, except as otherwise provided in COMAR 10.51.05.12.

(i) (text unchanged)

(ii) A detailed engineering description of the facility design including: a description of measures to divert

run-on away from the pile; a description of the leachate and run-off collection and control system; a description of the foundation supporting the base; design specifications of the pile base and liner or liners including the estimated containment life of the base and the permeability of the liner or liners; estimated life of the hazardous waste pile; and if applicable under [COMAR 10.51.05.12E(1)(c)] *COMAR 10.51.05.12D (1)(a)(ii)* a description of the leachate detection, collection and removal system including the system's relation to the water table and a description of any efforts to control the water table.

(iii) A detailed description of the facility operating procedures which demonstrate compliance with COMAR 10.51.05.12*C-1, D,* E and F, including: a description of efforts to protect the containment system from plant growth which could puncture any component of the system; a description of design and operating procedures to properly manage and dispose of any leachate that is a hazardous waste; a description and listing of all equipment and procedures used to place the waste in or on the pile or to clean and expose the liner surface; and a description of efforts to separate hazardous waste that is incompatible with any waste or material stored nearby including the design specifications of any dike, bern, wall, or other device used to separate the materials.

(e) (text unchanged)

[(f) For facilities that store or treat hazardous waste in waste piles, except as otherwise provided in COMAR 10.51.05.12.]

[(g)] *(f)* For waste piles, except as otherwise provided by §A(5) [(h)] *(g)* of this regulation.

[(h)] *(g)* (text unchanged)

(i) —(iv) (text unchanged)

(v) A description of how each waste pile, including the liner and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of COMAR 10.51.05.12D and D-1. This information should be included in the inspection plan submitted under COMAR 10.51.07.02A (4) (t).

(vi) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quantity of the residuals.

(vii) If ignitable or reactive wastes are to be placed in a waste pile, an explanation of how the requirements of .12E will be complied with.

(viii) If compatible wastes, or incompatible wastes and materials will be placed in a waste pile, an explanation of how COMAR 10.51.05.12 F will be complied with.

(ix) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile upon closure. The owner or operator shall submit detailed plans and an engineering report describing how COMAR 10.51.05.12J (1) and (2) will be complied with. This information should be included in the closure plan, and when applicable, the post-closure plan submitted under COMAR 10.51.07.02A(4)(dd).

(h) Land Treatment. For facilities that use land treatment to dispose of hazardous waste, except as otherwise provide in COMAR 10.51.05.01.

(i) A description of plans to conduct a treatment demonstration as required under COMAR 10.51.05.13C. The description shall include information concerning the wastes for which the demonstration will be made and the potential hazardous constituents in the wastes, the data sources to be used to make demonstration (for example, literature, laboratory data, field date, or operating data), any specific laboratory or field test that will be conducted, including the type of test (for example, column leaching, degradation), materials and methods, including analytical procedures, expected time for completion, and characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices.

(ii) A description of a land treatment program, as required under COMAR .10.51.05.13B. This information shall be submitted with the plan for the treatment demonstration, and updated following the treatment demonstration. The land treatment program shall address the following items:

(aa) The wastes to be land treated;

(bb) Design measures and operating practices necessary to maximize treatment in accordance with COMAR 10.51.05.13D(1);

(cc) Waste application method and rate;

(dd) Measures to control soil pH;

(ee) Enhancement of microbial or chemical reactions;

(ff) Control of moisture content;

(gg) Provisions for unsaturated zone monitoring, including: sampling equipment, procedures, frequency, procedures for selecting sampling locations, analytical procedures, chain of custody control, procedures for establishing background values, statistical methods for interpreting results;

(hh) The justification for any hazardous constiuents recommended for selection as principal hazardous constiuents, in accordance with the criteria for the selection in COMAR 10.51.05.13I(1);

(ii) A list of hazardous constiuents reasonably expected to be in, or derived, from, the wastes to be land treated based on waste analysis performed pursuant to COMAR 10.51.05.02;

(jj) The proposed dimensions of the treatment zone.

(ii) A list of hazardous constituents reasonably expected to be in, or derived, from, the wastes to be land treated based on waste analysis performed pursuant to COMAR 10.51.05.02;

(jj) The proposed dimensions of the treatment zone.

(iii) A description of how the unit is or will be designed, constructed, operated, and maintained in order to meet the requirements of COMAR 10.51.05.13D. This submission shall address the following items:

(aa) Control of run-on.

(bb) Collection and control of run-off.

(cc) Minimization of run-off of hazardous constituents from the treatment zone.

(dd) Management of collection and holding facilities associated with run-on and run-off control systems.

(ee) Periodic inspection of the unit. This information should be included in the inspection plan submitted under COMAR 10.51.07.02A(1)(t).

(ff) Control of wind dispersal of particulate matter, if applicable.

(iv) If food-chain crops are to be grown in or on the treatment zone of the land treatment unit, a description of how the demonstration required under COMAR 10.51.05.13G (1) was conducted including:

(aa) Characteristics of the food-chain crop for which the demonstration will be made:

(bb) Characteristics of the waste, treatment zone, and waste application method and rate to be used in the demonstration;

(cc) Procedures for crop growth, sample collection, sample analysis, and data evaluation;

(dd) Characteristics of the comparison crop including the location and conditions under which it was or will be grown.

(v) If food-chain crops are to be grown, and cadmium is present in the land treated waste, a description of how the requirements of COMAR 10.51.13B G (5) will be complied with.

(vi) A description of the vegetative cover to be applied to closed portions of the facility, and a plan for maintaining the cover during the post-closure care period, as required under COMAR 10.51.05.13K (1) (h) and (3) (b). This information should be included in the closure plan and, when applicable, the post-closure care plan submitted under COMAR 10.51.07.02A (4) (dd).

(vii) If ignitable or reactive wastes will be placed in or on the treatment zone, an explanation of how the requirements of COMAR 10.51.05.13L will be complied with.

(viii) If compatible wastes, or incompatible wastes and materials, will be placed in or on the same treatment zone, an explanation of how COMAR 10.51.05.13M will be complied with.

(i) Landfills. For facilities that dispose of hazardous waste in landfills, except as otherwise provided in COMAR 10.51.05.01.

(i) A list of the hazardous wastes placed or to be placed in each landfill or landfill cell.

(ii) Detailed plan and an engineering report describing how the landfill is or will be designed, constructed, operated, and maintained to comply with the requirements of COMAR 10.51.05.14B. This submission shall address the followng items as specified in COMAR 10.51.05.14B:

(aa) The liner system and leachate collection and removal system (except for an existing portion of landfill). If an exemption from the requirements for a liner and a leachate collection and removal system is sought as provided by COMAR 10.51.05.14B(2), submit detailed plans and engineering hydrogeologic reports as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water or surface water at any future time.

(bb) Control of run-on.

(cc) Control of run-off.

(dd) Management of collection and holding facilities associated with run-on and run-off control systems.

(ee) Control of wind dispersal of particulate matter, when applicable.

(iii) A description of how each landfill, including the liner and over systems, will be inspected in order to meet the requirements of COMAR 10.51.05.13C (1) and (2). This information should be included in the inspection plan submitted under COMAR 10.51.07.02A (4) (d).

(iv) Detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with COMAR 10.51.05.14J (1), and a description of how each landfill will be maintained and monitored after closure in accordance with COMAR 10.51.05.14J (2). This information should be included in the closure and post-closure plans submitted under COMAR 10.51.07.02A (4) (dd).

(v) If ignitable or reactive wastes will be landfilled, an explanation of how the requirements of COMAR 10.51.05.14L will be complied with.

(vi) If incompatible wastes, or incompatible wastes and materials will be landfilled, an explanation of how COMAR 10.51.05.14M will be complied with.

(vii) If containers of hazardous waste are to be landfilled, an explanation of how the requirements of COMAR 10.51.05.14O as applicable, will be complied with.

(6) Additional Information Requirements. The following additional information regarding protection of ground water is required from owners or operators of hazardous waste surface impoundments, piles, land treatment units, and landfills, except as otherwise provided in COMAR 10.51.05.06A (2):

(a) A summary of the ground water monitoring data obtained from the requirements of COMAR 10.51.05.06A — E, when applicable.

(b) Identification of the uppermost aquifer and aquifers hydraulically interconnected beneath the facility property, including ground water flow direction and rate, and the basis for the identification, such as the information obtained from hydrogeologic investigation of the facility area.

(c) On the topographic map required under COMAR 10.51.07.02A (4) (jj), a delineation of the waste management area, the property boundary, the proposed point of compliance as defined under COMAR 10.51.05.06F, the proposed location of ground water monitoring wells as required under COMAR 10.51.05.06H and, to the extent possible, the information required in §A (6) (b).

(d) A description of any plume of contamination that has entered the ground water from a regulated unit at the time the application is submitted that:

(i) Delineates the extent of the plume on the topographic map required under COMAR 10.51.07.02A (4) (jj);

(ii) Identifies the concentration of each Appendix V constituent from COMAR 10.51.02 throughout the plume or identifies the maximum concentrations of each Appendix V constituents in the plume.

(e) Detailed plans and an engineering report describing the proposed ground water monitoring program to be implemented to meet the requirements of COMAR 10.51.05.06H.

(f) If the presence of hazardous constituents has not been detected in the ground water at the time of permit application, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a detection monitoring program which meets the requirements of COMAR 10.51.05.06I. This submission shall address the following items as specified under COMAR 10.51.05.06I:

(i) A proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of the presence of hazardous constituents in the ground water;

(ii) A proposed ground water monitoring system;

(iii) Background values for each proposed monitoring paramater or constituent, or procedures to calculate these values; and

(iv) A description of proposed sampling analysis and statisticai comparison procedures to be used in evaluating ground water monitoring data.

(g) If the presence of hazardous constituents has been detected in the ground water at the point of compliance at the time of permit application, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a compliance monitoring program which meets the requirements of COMAR 10.51.05.06J. The owner or operator shall also submit an engineering feasibility plan for a corrective action program necessary to meet the

requirements of COMAR 10.51.05.06K except as provided COMAR 10.51.05.06I(8)(e). To demonstrate compliance with COMAR 10.51.05.06J, the owner or operator shall address the following items:

(i) A description of the wastes previously handled at the facility;

(ii) A characterization of the contaminated ground water, including concentrations of hazardous constituents;

(ii) A list of hazardous constituents for which compliance monitoring will be undertaken in accordance with COMAR 10.51.06.06H and J;

(iv) Proposed concentration limits for each hazardous constituent, based on the criteria set forth in COMAR 10.51.05.06E (1) including a justification for establishing any alternate concentration limits;

(v) Detailed plans and an engineering report describing the proposed ground water monitoring system, in accordance with the requirements of COMAR 10.51.05 .06H; and

(vi) A description of proposed sampling, analysis and statistical comparison procedures to be used in evaluating ground water monitoring data.

(h) If hazardous constituents have been measured in the ground water which exceed the concentration limits established under COMAR 10.51.05.06E, Table 1, or if ground water monitoring conducted at the time of permit application under COMAR 10.51.05.06A — E at the waste boundary indicates the presence of hazardous constituents from the facility in ground water over background concentrations, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a corrective action program which meets the requirements of COMAR 10.51.05.06K. However, an owner or operator is not required to submit information to establish a corrective action program if he demonstrates to the Secretary that alternate concentration limits will protect human health and the environment after considering the criteria listed in COMAR 10.51.05.06E (2). An owner or operator who is not required to establish a corrective action program for this reason shall instead submit sufficient information to establish a compliance monitoring program which meets the requirements of COMAR 10.51.05.06J and (6)(f). To demonstrate compliance with COMAR 10.51.05.06K, the owner or operator shall address, at a minimum, the following items:

(i) A characterization of the contaminated ground water, including concentration of hazardous constituents;

(ii) The concentration limit for each hazardous constituent found in the ground water as set forth in COMAR 10.51.05.06E;

(iii) Detailed plans and an engineering report describing the corrective action to be taken; and

(iv) A description of how the groundwater monitoring program will assess the adequacy of the corrective action.

(7) Incineration. For facilities that incinerate hazardous waste, except as COMAR 10.51.05.15-1B provides otherwise, the application shall fulfill the requiremenmts of §A(6)(a)(b) and (c).

(a) When seeking exemption under COMAR 10.51.05.15-1B (ignitable, corrosive or reactive wastes only), documentation that the waste is:

(i) Listed as a hazardous waste in COMAR 10.51.02.14 — .17 solely because it is ignitable (Hazard Code I), corrosive (Hazard Code C), or both;

(ii) Listed as a hazardous waste in COMAR 10.51.02.14 — .17 solely because it is reactive (Hazard Code R) for characteristics other than those listed in COMAR 10.51.02.12A(4) and (5), and will not be burned when other hazardous wastes are present in the combustion zone;

(iii) A hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by the tests for characteristics of hazardous waste under COMAR 10.51.02.10 — .11; or

(iv) A hazardous waste solely because it possesses the reactivity characteristics listed in COMAR 10.51.02.12A(1), (2), (3), (6), (7), or (8), and that it will not be burned when other hazardous wastes are present in the combustion zone.

(b) Submit a trial burn plan, or the results of a trial burn including all required determinations, conducted in accordance with COMAR 10.51.07.03P, including all determinations required by COMAR 10.51.07.02P.

(c) Instead of a trial burn, the applicant may submit the following information:

(i) An analysis of each waste or mixture of wastes to be burned including:

(aa) Heat value of the waste in the form and composition in which it will be burned.

(bb) Viscosity (if applicable), or description of physical form of the waste.

(cc) An identification of any hazardous organic constituents listed in COMAR 10.51.02 Appendix V, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in COMAR 10.51.02. Appendix V, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis shall be identified and the basis for their exclusion stated. The waste analysis shall rely on analytical techniques specified in 40 C.F.R. Part 261, Appendix III.

(dd) An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by the analytical methods specified in 40 C.F.R. Part 261, Appendix III.

(ee) A quantification of those hazardous constituents in the waste which may be designated as POHC's based on data submitted from other trial or operational burns which demonstrate compliance with the performance standard in COMAR 10.51.05.15-1F.

(ii) A detailed engineering description of the hazardous waste incinerator, including:

(aa) Manufacturer's name and model number of incinerator;

(bb) Type of incinerator;

(cc) Linear dimension of incinerator unit including cross sectional area of combustion chamber;

(dd) Description of auxilliary fuel system (type/ feed);

(ee) Capacity of prime mover;

(ff) Description of automatic waste feed cutoff system or systems;

(gg) Stack gas monitoring and pollution control monitoring system;

(hh) Nozzle and burner design;

(ii) Construction materials;

(jj) Location and description of temperature, pressure, and floe indicating devices and control devices.

(iii) A description and analysis of the waste to be burned compared with the waste for which data from operational or trial burns are provided to support the contention that a trial burn is not needed. The data should include those items listed in §A(7)(c)(i)(aa). This analysis should specify the POHC's which the applicant has identified in the waste for which a permit is sought, and any differences

from the POHC's in the waste for which burn data are provided.

(iv) The design and operating conditions of the hazardous waste incinerator unit to be used, compared with that for which comparative burn data are available.

(v) A description of the results submitted from any previously conducted trial burn or burns including:

(aa) Sampling and analysis techniques used to calculate performance standards in COMAR 10.51.05.15-1F;

(bb) Methods and results of monitoring temperatures, waste feed rates, carbon monoxide, and an appropriate indicator of combustion gas velocity (including a statement concerning the precision and accuracy of this measurement); and

(cc) The certification and results required by §P.

(vi) The expected hazardous waste incinerator operation information to demonstrate compliance with COMAR 10.51.05.15-1F and H including:

(aa) Expected carbon monoxide (CO) level in the stack exhaust gas;

(bb) Waste feed rate;

(cc) Combustion zone temperature;

(dd) Indication of combustion gas velocity;

(ee) Expected stack gas volume, flow rate, and temperature;

(ff) Computed residence time for waste in the combustion zone;

(gg) Expected hydrochloric acid removal efficiency;

(hh) Expected fugitive emissions and their control procedures; and

(ii) Proposed waste fed cut-off limits based on the identified significant operating parameters.

(vii) Such supplemental information as the Secretary finds necessary to achieve the purpose of this paragraph.

(viii) Waste analysis data, including that submitted in §A(7)(c)(i)(aa), sufficient to allow the Secretary to specify as permit Principal Organic Hazardous Constituents (permit POHC's) the constituents for which destruction and removal efficiencies will be required.

(d) The Secretary shall approve a permit application without a trial burn if he finds that the:

(i) Wastes are sufficiently similar; and

(ii) Hazardous waste incinerator units are sufficiently similar, and the data from other trial burns are sufficiently similar, and the data from other trial burns are adequate to specify, under COMAR 10.51.05.151-H operating conditions that will ensure that the performance standards in COMAR 10.51.05.151-F will be met by the incinerator.

(8) Any facility with an effective permit shall submit to the Secretary a new application at least 180 days before the expiration date of the effective permit, unless permission for a later date has been granted by the Secretary. The later date may not be after the expiration date of the effective permit.

B. Signatories to Permit Application and Reports.

(1)—(3) (text unchanged)

(4) Certification. Any person signing a document under §B(1) or (2) shall make the following certification: [I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.], *Certify Under Penalty of Law That I Personally Examined and am Familiar With the Information Submitted in this Document and all Attachments, and That, Based on My Inquiry of Those Individuals Immediately Responsible for Obtaining the Information, I Believe that the Information is True, Accurate, and Complete. I am Aware That There are Significant Penalties for Submitting False Information, Including the Possibility of Fine or Imprisonment.*

C.—E. (text unchanged)

F. Schedules of Compliance.

(1) The permit may, when appropriate, specify a schedule of compliance leading to compliance with the appropriate regulations.

(a)—(b) (text unchanged)

(c) Reporting. The permit shall be written to require that not later than 14 days following each interim date and the final date of compliance, the permittee shall notify the Secretary in writing of its compliance or noncompliance with the interim or final requirements [, or submit progress reports if §F(1)(a)(ii) is applicable].

(2) Alternate Schedules of Compliance. A permit applicant or permittee may cease conducting regulated activities (by receiving terminal volume of hazardous waste [for Hazardous Waste Management Facilities]*and for treatment and storage HWM facilities, closing pursuant to applicable requirements, and for disposal HWM facilities, closing and conducting post-closure care pursuant to applicable requirements)* rather than continue to operate and meet permit requirements as follows:

(a)—(b) (text unchanged)

(c) If the permittee is undecided whether to cease conducting regulating activities [.],[The]*the* Secretary may issue or modify a permit to contain two schedules as follows:

(i)—(iv) (text unchanged)

(d) (text unchanged)

G.—I. (text unchanged)

J. Modification or Revocation and Reissuance of Permits. When the Secretary receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit, receives a request for modification or revocation and reissuance or conducts a review of the permit file) he or she may determine whether or not one or more of the causes listed in §J(1) and (2) for modification or revocation and reissuance or both exist. If cause exists, the Secretary may modify or revoke and reissue the permit accordingly, subject to the limitations of §J(3), and may request an updated application if necessary. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. If cause does not exist under this section or §L, the Secretary may not modify or revoke and reissue the permit. If a permit modification satisfies the criteria in §L for "minor modifications" the permit may be modified without a draft permit or public review. Otherwise, a draft permit shall be prepared and other procedures of this chapter followed.

(1) Causes of Modification. The following are causes for modification but not revocation and reissuance of permits:

(a) — (c) (text unchanged)

(d) Modification. The Secretary may modify a permit:

(i) — (iii) (text unchanged)

*(iv) When the corrective action program specified in the permit under **COMAR 10.51.05.06K** has not brought the regulated unit into compliance with the groundwater protection standard within a reasonable period of time.*

*(v) To include a detection monitoring program meeting the requirements of **COMAR 10.51.05.06I**, when the owner or operator has been conducting a compliance action program under **COMAR 10.51.05.06K** and the compliance period ends before the end of the post-closure care period for the unit.*

*(vi) When a permit requires a compliance monitoring program under **COMAR 10.51.05.06J**, but monitoring data collected before permit issuance indicate that the facility is exceeding the groundwater protection standard.*

(vii) To include conditions applicable to units at a facility that were not previously included in the facility's permit.

(viii) When a land treatment unit is not achieving complete treatment of hazardous constituents under its current permit conditions.

K. (text unchanged)

L. Minor Modifications of Permits. Upon the consent of the permittee, the Secretary may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following the procedures of Regulation .03.Any permit modification not processed as a minor modification under this section shall be made for cause and with the draft permit and public notice as required in §J. Minor modifications may only:

(1) — (6) (text unchanged)

*(7) Change the treatment program requirements for land treatment units made under **COMAR 10.51.05.13B** to improve treatment of hazardous constituents, provided the change is minor.*

(8) Change any conditions specified in the permit for land treatment units to reflect the results of field tests or laboratory analyses used in making a treatment demonstration in accordance with §M(2), provided that the change is minor.

*(9) Allow a second treatment demonstration for land treatment to be conducted when the results of the first demonstration have not shown the conditions under which the waste or wastes can be treated completely as required by **COMAR 10.51.05.13C** (1), provided the conditions for the second demonstration are substantially the same as the conditions for the first demonstration.*

(10) Change the ranges of the operating requirements set in a hazardous waste incinerator permit to reflect the results of the trial burn, provided that the change is minor.

(11) Change the operating requirements set in a hazardous waste incinerator permit for conducting a trial burn, provided that the change is minor.

(12) Grant one extension of the time period for determining operational readiness of a hazardous waste incinerator following completion of construction, for up to 720 hours operating time for incineration of hazardous waste.

M. Emergency Permits *and Short Term Permits and Phased Permits.*

(1) (text unchanged)

[(1) — (4)]*(a) — (d)* (text unchanged)

[(5)] *(e)* (text unchanged)

[(a) — (e)] *(i) — (v)* (text unchanged)

[(6)] *(f)* (text unchanged)

*(2) Short Term Permits. For the purpose of allowing an owner or operator to meet the treatment demonstration requirements of **COMAR 10.51.05.13C**, the Secretary may issue a treatment demonstration permit. The permit shall contain only those requirements necessary to meet the standards in **COMAR 10.51.05.13C** (3). The permit may be issued either as a treatment or disposal permit covering only the field test or laboratory analyses, or as a two-phase facility permit covering the field tests, or laboratory analyses, and design, construction, operation and maintenance of the land treatment unit.*

(a) The Secretary may issue a two-phase facility permit if he finds that, based on information submitted in the application, substantial, although incomplete or inconclusive, information already exists upon which to base the issuance of a facility permit.

*(b) If the Secretary finds that not enough information exists upon which he can establish permit conditions to attempt to provide for compliance with all of the requirements of **COMAR 10.51.05.13** he shall issue a treatment demonstration permit covering only the field test or laboratory analyses.*

*(3) Phased Permits. If the Secretary finds that a phased permit may be issued, he will establish, as requirements in the first phase of the facility permit, conditions for conducting the field tests of laboratory analyses. These permit conditions will include design and operating parameters (including the duration of the tests or analyses and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone), monitoring procedures, post-demonstration clean-up activities, and any other conditions which the Secretary finds may be necessary under **COMAR 10.51.05.13C** (3). The Secretary will include conditions in the second phase of the facility permit to attempt to meet all requirements pertaining to unit design, construction, operation, and maintenance in **COMAR 10.51.05.13**. The Secretary will establish these conditions in the second phase of the permit based upon the substantial but incomplete or inconclusive information contained in the application.*

*(a) The first phase of the permit will be effective as provided in **COMAR 10.51.07.03L** (3).*

(b) The second phase of the permit will be effective as provided in §M (5).

*(4) When the owner or operator who has been issued a two-phase permit has completed the treatment demonstration, he shall submit to the Secretary a certification, signed by a person authorized to sign a permit application or report under **COMAR 10.51.07.02B**, that the field tests or laboratory analyses have been carried out in accordance with the conditions specified in phase one of the permit for conducting the tests or analyses. The owner or operator shall also submit all data collected during the field tests of laboratory analyses within 90 days of completion of those tests or analyses unless the Secretary approves a later date.*

*(5) Modification. If the Secretary determines that the results of the field tests or laboratory analyses meet the requirements of **COMAR 10.51.05.13C**, he will modify the second phase of the permit to incorporate any requirements necessary for operation of the facility in compliance with **COMAR 10.51.05.13**, based upon the results of the field tests or laboratory analyses.*

*(a) This permit modification may proceed as a minor modification under **COMAR 10.51.07.02L**, provided any such change is minor, or otherwise will proceed as a modification under **COMAR 10.51.07.02J**.*

(b) If no modification of the second phase of the permit is necessary, or if only minor modifications are necessary and have been made, the Secretary will give notice of his final decision to the permit applicant and to each person who submitted written comments on the phased permit or who requested notice of final decision on the second phase of the permit. The second phase of the permit then will become effective as specified in COMAR 10.51.07.03L (3).

(c) If modifications under COMAR 10.51.07.02J are necessary, the second phase of the permit will become effective only after those modifications have been made.

N. Additional Conditions; Applicable Permits.

(1)—(2) (text unchanged)

(3) For a new hazardous waste management facility, the permittee may not begin treatment, storage, or disposal of hazardous waste, and for a facility being modified the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility until:

(a)—(b) (text unchanged)

(c) Within 15 days of the date of the submission of the letter in §N(3)(a), the permittee has not received notice from the Secretary of his or her intent to inspect, [before] prior inspection is waived, and the permittee may begin treatment, storage, or disposal of hazardous waste.

(4) The following shall be included as information which shall be reported only within 24 hours [:] *as required by §C(12)(f):*

(a)—(b) (text unchanged)

(5)—(6) (text unchanged)

O. (text unchanged)

P. Hazardous Waste Incinerator Permits.

(1) Start-up.

(a) For the purposes of determining operational readiness following completion of physical construction, the Department will establish permit conditions, including but not limited to allowable waste feeds and operating conditions, in the permit for a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to bring the incinerator to a point of operational readiness sufficient to conduct a trial burn, not to exceed 720 hours operating time for incineration of hazardous waste. The Department may extend the duration of this operational period once, for up to 720 additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to §L.

(b) Applicants shall submit a statement, with the permit application, which suggests the conditions necessary to operate in compliance with the performance standards of COMAR 10.51.05.15-1F during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates and the operating parameters identified in COMAR 10.51.05.15-1H.

(c) The Department will review this statement and any other relevant information submitted with the permit application and specify requirements for this period sufficient to meet the performance standards of COMAR 10.51.05.151-F based on its engineering judgment.

(2) Trial burn.

(a) For the purposes of determining feasibility of compliance with the performance standards of COMAR 10.51.05.15-1F and of determining adequate operating conditions under COMAR 10.51.05.15-1H, the Department will establish conditions in the permit to a new hazardous waste incinerator to be effective during the trial burn.

(b) Applicants shall propose a trial burn plan, prepared under §P(2)(c).

(c) The trial burn plan shall include the following information:

(i) An analysis of each waste or mixture of wastes to be burned which includes:

(aa) Heat value of the waste in the form and composition in which it will be burned.

(bb) The viscosity (if applicable), or description of physical form of the waste.

(cc) An identification of any hazardous organic constituents listed in COMAR 10.51.05.02, Appendix V, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in COMAR 10.51.05.02, Appendix V, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis shall be identified, and the basis for their exclusion stated. The waste analysis shall rely on analytical techniques specified in 40 C.F.R. Part 261, Appendix III.

(dd) An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by the analytical methods specified in 40 C.F.R. Part 261, Appendix III.

(ii) A detailed engineering description of the hazardous waste incinerator for which the permit is sought including:

(aa) Manufacturer's name and model number of incinerator (if available);

(bb) Type of incinerator;

(cc) Linear dimensions of the incinerator unit including the cross sectional area of combustion chamber;

(dd) Description of the auxiliary fuel system (type/feed);

(ee) Capacity of prime mover;

(ff) Description of automatic waste feed cut-off system or systems;

(gg) Stack gas monitoring and pollution control equipment;

(hh) Nozzle and burner design;

(ii) Construction materials;

(jj) Location and description of temperature, pressure, and flow indicating and control devices.

(iii) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(iv) A detailed test schedule for each waste for which the trial burn is planned including date or dates, duration, quantity of waste to be burned, and other factors relevant to the Department's decision under §P(2)(f).

(v) A detailed test protocol, including, for each waste identified, the ranges of temperature, waste feed rate, combustion gas velocity, use of auxiliary fuel, and any other relevant parameters that will be varied to affect the destruction and removal efficiency of the incinerator.

(vi) A description of, and planned operating conditions for any emission control equipment which will be used.

(vii) Procedures for rapidly stopping waste feed, shutting down the incinerator, and controlling emissions in the event of an equipment malfunction.

(viii) Such other information as the Department reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of this paragraph and the criteria in §P(2)(f).

(d) The Department, in reviewing the trial burn plan, shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of this paragraph.

(e) Based on the waste analysis data in the trial burn plan, the Department will specify as trial Principal Organic Hazardous Constituents (POHC's), those constituents for which destruction and removal efficiencies must be calculated during the trial burn. These trial POHC's will be specified by the Department based on its estimate of the difficulty of incineration of the constituents identified in the waste analysis, their concentration or mass in the waste feed, and for wastes listed in ***COMAR 10.51.02.14 — .17****, the hazardous waste organic constituent of constituents identified in Appendix V of* ***COMAR 10.51.02*** *as the basis for listing.*

(f) The Department will approve a trial burn plan if it finds that the:

(i) Trial burn is likely to determine whether the hazardous waste incinerator performance standard required by ***COMAR 10.51.05.15-1F*** *can be met;*

(ii) Trial burn itself does not present an imminent hazard to human health or the environment;

(iii) Trial burn will help the Department determine operating requirements to be specified under ***COMAR 10.51.05.15-1H****; and*

(iv) Information sought in §P(2)(f)(i) and (iii) cannot reasonably be developed through other means.

(g) During each approved trial burn (or as soon after the burn as is practicable), the applicant shall make the following determinations:

(i) A quantitative analysis of the trial POHC's in the waste feed to the incinerator;

(ii) A quantitative analysis of the exhaust gas for the concentration and mass emissions of the trial POHC's oxygen (O_2) and hydrogen chloride (HCl);

(iii) A quantitative analysis of the scrubber water (if any), ash residues, and other residues, for the purpose of estimating the fate of the trial POHC's;

(iv) A computation of destruction and removal efficiency (DRE), in accordance with the DRE formula specified in ***COMAR 10.51.05.15-1F(1)****;*

(v) If the HCl emission rate exceeds 1.8 kilograms of HCl per hour (4 pounds per hour), a computation of HCl removal efficiency in accordance with ***COMAR 10.51.05.15-1F(2)****;*

(vi) A computation of particulate emissions, in accordance with ***COMAR 10.51.05.15-1F(3)****;*

(vii) An identification of sources of fugitive emissions and their means of control;

(viii) A measurement of average, maximum, and minimum temperatures and combustion gas velocity;

(ix) A continuous measurement of carbon monoxide (CO) in the exhaust gas and;

(x) Such other information as the Department may specify as necessary to ensure that the trial burn will determine compliance with the performance standards in ***COMAR 10.51.05.15-1F*** *and to establish the operating conditions required by* ***COMAR 10.51.05.15-1H*** *as necessary to meet those performance standards.*

(h) The applicant shall submit to the Department a certification that the trial burn has been carried out in accordance with the approved trial burn plan, and shall submit the results of all the determinations required in §P(2)(g). This submission shall be made within 90 days of completion of the trial burn, or later if approved by the Department.

(i) All data collected during any trial burn shall be submitted to the Department following the completion of the trial burn.

(j) All submissions required by this paragraph shall be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under §B.

(k) Based on the results of the trial burn, the Department shall set the operating requirements in the final permit according to ***COMAR 10.51.05.15-1H****. The permit modification shall proceed as a minor modification according to §L.*

(3) Post Trial Burn.

(a) For the purposes of allowing operation of a new hazardous waste incinerator following completion of the trial burn and before final modification of the permit conditions to reflect the trial burn results, the Department may establish permit conditions, including but not limited to allowable waste feeds and operating conditions sufficient to meet the requirements of ***COMAR 10.51.05.15-1H****, in the permit for a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to complete sample analysis, data computation and submission of the trial burn results by the applicant, and modification of the facility permit by the Department.*

(b) Applicants shall submit a statement, with the permit application, which identified the conditions necessary to operate in compliance with the performance standards of ***COMAR 10.51.05.15-1F*** *during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates and the operating parameters identified in* ***COMAR 10.51.05.15-1H****.*

(c) The Department will review this statement and any other relevant information submitted with the permit application and specify those requirements for this period most likely to meet the performance standards of ***COMAR 10.51.05.15-1*** *based on its engineering judgment.*

(4) For the purposes of determining feasibility of compliance with the performance standards of ***COMAR 10.51.05.15-1F*** *and of determining adequate operating conditions under* ***COMAR 10.51.05.15-1H****, the applicant for a permit to an existing hazardous waste incinerator may prepare and submit a trial burn plan and perform a trial burn in accordance with §P(2)(c) — (i). Applicants who submit trial burn plans and receive approval before submission of a permit application shall complete the trial burn and submit the results, specified in §P(2)(g), with the permit application. If completion of this process conflicts with the date set for submission of the application, the applicant shall contact the Department to establish a later date for submission of the application or the trial burn results. If the applicant submits a trial burn plan with Part B of the permit application, the trial burn shall be conducted and the results submitted within a time period to be specified by the Department.*

.03 Administrative Procedures.

A. Application for Permit.

(1) (text unchanged)

(2) The Secretary may not begin the processing of a permit until [he] *the applicant* has fully complied with the application requirements.

(3) (text unchanged)

(4) The Secretary shall review for completeness each application for a permit. Each application for a permit submitted by a hazardous waste management facility should be reviewed for completeness by the Secretary within [30] *60* days of its receipt. Upon completing the review, the Secretary shall notify the applicant in writing whether the application is complete. If the application is incomplete, the Secretary shall list the information necessary to make the application complete. After the application is completed, the Secretary may request additional information from an applicant but only when necessary to clarify, modify, or supplement previously submitted material. Requests for additional information may not render an application incomplete.

(5)—(8) (text unchanged)

B. Modifications, Revocation and Reissuance, or, Termination of Permits.

(1) (text unchanged)

(2) If the Secretary decides the request is not justified, he or she shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or terminations are not subject to public notice, comment, or hearings. Denials by the Secretary may be informally appealed by a letter briefly setting forth the relevant facts. The appeal shall be made in accordance with [COMAR 10.51.01] *COMAR 10.05.10*.

(3)—(6)

C. Draft Permits.

(1)—(2) (text unchanged)

(3) If the Secretary decides to prepare a draft permit, he or she shall prepare a draft permit that contains the information described in §§C, D, [E], *F, G,* N and O of Regulation .02.

(4) (text unchanged)

D.—K. (text unchanged)

L. Issuance and Effective Date of Permit.

(1) After the close of the public comment period under §G on a draft permit, the Secretary shall issue a final permit decision. The Secretary shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. *This notice shall include reference to the procedures for appealing a decision on a permit or for contesting a decision to terminate a permit.*

(2)—(3) (text unchanged)

M. Response to Comments.

(1) At the time that any final permit is issued, the Secretary shall issue a response to comments. This response shall[:]

[(a) Specify]*specify* which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change [; and].

[(b) Briefly describe and respond to all significant comments on the draft permit or the permit application (for §404 permits only) raised during the public comment period, or during any hearing.]

(2)—(3) (text unchanged)

.05 Limited Facility Permits for Thermal Destruction Facilities other than Hazardous Waste Incinerators.

A. Permits Required.

(1) A person may not thermally destroy hazardous waste in an installation other than a hazardous waste incinerator without first obtaining a Limited Facility Permit and an air quality operating permit, except that an electric generating station is not required to obtain an air quality operating permit.

(2) The effects of these regulations with respect to persons who have submitted timely applications under §B(2) shall be stayed until the Department has either issued or denied the Limited Facility Permit, but only so long as the applicant operates in compliance with the terms and conditions of an approval issued by the Department under COMAR 10.18.11.06.

(3) Upon issuance of the Limited Facility Permit, the terms and conditions of the Limited Facility Permit will supersede the terms and conditions of any approval issued under COMAR 10.18.11.06.

B. Application for a Limited Facility Permit.

(1) A person may apply to the Department for a Limited Facility Permit on an application provided by the Department. The application shall include the following information:

(a) Identification of the application and a description of the installation in which the thermal destruction is to take place.

(b) The characteristics and quantity of the hazardous waste to be thermally destroyed. For ignitable, corrosive, reactive hazardous waste, the applicant shall submit evidence of the exemption under COMAR 10.51.05.15B(2).

(c) A waste analysis plan as described in COMAR 10.51.05.02D(2).

(d) A general inspection schedule as described in COMAR 10.51.05.02F(2).

(e) A contingency plan as described in COMAR 10.51.05.04.

(f) A closure plan as described in COMAR 10.51.05.07C, except that COMAR 10.51.05.07C(4) regarding public comment on the closure plan does not apply to permits issued under this regulation.

(g) A closure cost estimate, as described in COMAR 10.51.05.08C, evidence of financial responsibility, as described in COMAR 10.51.05.08D, and evidence of insurance, as described in COMAR 10.51.05.08H. A cost estimate for post-closure care and financial assurance for post closure is not required for facilities that thermally destroy hazardous waste.

(h) A person who has received an exemption under COMAR 10.51.05.15-1B(2) shall also comply with COMAR 10.51.05.01—.05, .07,and .08.

(i) Any other information the Department may request in order to make a determination under this regulation.

(j) The signature on the application of the applicant, if the applicant is an individual person, or of a person who is a responsible official as described in COMAR 10.51.07.02B(1) of the organization, if the applicant is a business, governmental, or other organization entity.

(2) An installation subject to §A(1) that was in operation on the effective date of these regulations shall apply to the Department for a Limited Facility permit on an application provided by the Department within 6 months of the effective date of this regulation. The application shall contain the information requested in §B(1).

C. Issuance of a Limited Facility Permit.

(1) General. Applications for a Limited Facility Permit will be reviewed and a permit issued by the Department, based on the combustion efficiency and capacity of the installation to be used to destroy the waste. In determining the approvability of an application, the Department will consider the characteristics of the components in the waste and the capability of the installation to dispose of the waste

in a manner that will have no adverse impact on the environment or on persons living in the area of the installation proposed to be used.

(2) Specific Requirements. A permit may be issued if the following requirements are met:

(a) The burner within the installation shall be of a type and size to burn the specified waste and the heat energy demand of the installation shall be constant during the time when the waste is burned or otherwise capable of maintaining the required combustion conditions.

(b) The stack height of the installation shall be consistent with good engineering practice.

(c) The installation shall be operated and maintained by a person directly assigned to those responsibilities.

(d) The discharge of components of the waste or products of combustion of the waste, including sulfur, lead, and halogenated compounds, may not cause a violation of any ambient air quality standards at ***COMAR 10.18.03*** *and* ***COMAR 10.18.04*** *or cause a threat to public health.*

(e) If PCB's are present in the waste to be destroyed, the PCB content of the waste shall be within allowable limits for the selected installation as specified by the U.S. EPA.

D. Permit Conditions and Procedures.

(1) The conditions and procedures specified at ***COMAR 10.51.07.02C — M*** *as applicable to facility permits shall also apply to Limited Facility Permits.*

(2) The Department may establish conditions on a permit for the purpose of monitoring and controlling the efficiency of combustion of the waste, the products of combustion in the exhaust, or the composition of the waste feed.

(3) The Department will deny an application for a Limited Facility Permit if it determines that the requirements of §§B and D of this regulation or any other applicable requirements under this subtitle have not been satisfied.

E. Permit Duration. A limited Facility Permit under this regulation is valid for 3 years unless modified, revoked, or terminated under ***COMAR 10.51.07.02J*** *or* ***COMAR 10.51.07.03B.***

ADELE WILZACK
Secretary of Health and Mental Hygiene

[Md. R. Doc. No. 83-R-392-P. Filed at Div. of St. Doc. Oct. 24, 1983.]

Notice of Final Action on Proposed Amendments
published May 11, 1984

PLEASE READ REVERSE SIDE

Transmittal Sheet **FINAL** Action on Regulations	Document Number	Date Filed with Division of State Documents
	Date of Publication in Maryland Register	

DO NOT WRITE ABOVE THIS LINE

1. Name of Regulations Coordinator: Raymond A. Huber — Telephone Number: 383-2964
2. Name of Person to Call re Document: Bernard Bigham — Telephone Number: 383-5740
3. Name of Promulgating Authority: Department of Health and Mental Hygiene
4. Statutory Authority for Promulgating Regulations: Health-Environmental Article §§7-208 thru 7-266, Annotated Code of Maryland
5. Name of COMAR Title of Regulations: Department of Health and Mental Hygiene
6. Name of COMAR Subtitle of Regulations: Disposal of Controlled Hazardous Substances
7. Name of COMAR Chapter of Regulations: Various
8. a. COMAR Chapter Number: .01 - .10 — b. COMAR Regulations Numbers: Various
9. Final Action was Taken on the Following Date: June, 1984
10. Final Action Becomes Effective on the Following Date:
☒ 10 Days after Issue of the Maryland Register, or
☐ Later Date, Specified Here: _____

11. Indicate Kind of Final Action Taken

a. ☒ Adopted as proposed
Submit: • 2 Copies of Notice of Final Action
• 2 Completed Transmittal Sheets

b. ☐ Adopted with non-substantial changes (see No. 11b, reverse side)
Submit: • 2 Copies of Notice of Final Action
• 2 Completed Transmittal Sheets
• 2 Copies of Regulations with Changes Shown

c. ☐ Repealed
Submit: • 2 Copies of Notice of Final Action
• 2 Completed Transmittal Sheets

d. ☐ Withdrawn voluntarily (see No. 11d, reverse side)
Submit: • 2 Copies of Notice of Withdrawal
• 2 Completed Transmittal Sheets

e. Indicate whether final action involves an incorporation by reference: ☐ Yes ☒ No
(If changes have been made in the document, include 25 copies of the changes)

f. Indicate whether final action involves a re-proposal of substantially different text: ☐ Yes ☒ No
(If yes, give Maryland Register citations to both initial proposal and re-proposal in No. 12, immediately below)

g. Give Md. R. Doc. No. of the proposed action (appears at the end of the document as printed in the Maryland Register)
84 - R - 123 - P

12. Proposed Action Published in the Maryland Register

Vol. No.	Issue No.	Page No's.	Issue Date
11	10	880 thru 889	Friday, May 11, 1984

13. Certificate of Authorized Officer

I certify that final action was taken on the regulatory text contained in the document either attached or referred to above, in compliance with Art. 41, §§ 244—256T, Annotated Code of Maryland.

Name of Authorized Officer: Adele Wilzack, R.N., M.S. BRIAN BILES, M.D.
Secretary — Telephone Number: 383-2600
Signature: [signature] — Date:

14. Certificate of Approval as to Legality

I certify that I approve the regulatory text contained in the document either attached or referred to above, as to its legality, pursuant to Art. 41, §9, Annotated Code of Maryland.

Name of Attorney General: Mr. Jeffrey E. Howard, Esq. — Telephone Number: 383-5560
Signature: Jeffrey E. Howard — Date: 6/27/84

Notice of Final Action

On June , 1984 amendments to Chapters .01 – .07 under COMAR 10.51., Disposal of Controlled Hazardous Substances, were adopted by the Secretary of Health and Mental Hygiene.

These amendments, which were proposed for adoption in 11:10 Md. R. 880-889 (May 11, 1984), have been adopted as proposed.

Effective Date:

MARYLAND REGISTER, VOL 11, ISSUE 10
FRIDAY, MAY 11, 1984
Pages 880-889

PROPOSED ACTION ON REGULATIONS

Subtitle 51 DISPOSAL OF CONTROLLED HAZARDOUS SUBSTANCES

Authority: Health-Environmental Article 7, Subtitle 2, Annotated Code of Maryland

Notice of Proposed Action

The Secretary of Health and Mental Hygiene proposes to amend the **COMAR** chapters printed below, to be effective on or about June 14, 1984.

These proposed amendments represent the final changes necessary to enable the State to secure final authorization of the Resource Conservation and Recovery Act. These changes, although voluminous in text, reflect no substantial program change.

Estimate of Economic Impact

I. Summary. The only economic change that will result from the adoption of this proposal is securance of continual funding from the Environmental Protection Agency for program support.

II. Types of Economic Impacts.	Revenue (+) Expense (–)	Magnitude
A. On issuing agency:	(+)	$715,000 (estimated F.Y. 85)
B. On other State or local agencies affected:	NONE	
	Benefit (+) Cost (–)	**Magnitude**
C. On regulated industries or trade groups:	NONE	
D. On other industries or trade groups affected:	NONE	
E. Direct and indirect effects on public:	Incalculable	

III. Assumptions. (Identified by Impact Letter and Number from Section II):

Under IIC., it must be assumed that if the State did not impose these added regulations, the Environmental Protection Agency would.

From IIE., an assumption is made that continued program management by the State would result in greater confidence by the public concerning hazardous waste issues.

Opportunity for Public Comment

The Office of Environmental Programs will hold a hearing concerning the adoption of these amendments on Monday, June 11, 1984 at 9:30 a.m. in Room L-3 of the O'Conor State Office Building, 201 West Preston Street, Baltimore,

Maryland 21201. All interested persons are invited to attend and give their views. Any hearing-impaired person may request an interpreter to be present at the hearing by giving five working days notice to the Chief Hearing Officer, Department of Health and Mental Hygiene.

Written comments may be sent to Raymond A. Huber, Sr., Regulations Coordinator, O'Conor Building, Room 314A, 201 West Preston Street, Baltimore, Maryland 21201. These comments must be received not later than the date of the hearing.

10.51.01 Hazardous Waste Management System: General

.03 Definitions.

A. (text unchanged)

B. Terms.

(1) — (19) (text unchanged)

(19-1) "Existing portion" means that land surface area of an existing hazardous waste management facility on which wastes have been placed before January 26, 1983.

(20) — (46) (text unchanged)

(47) "Open burning" means the combustion of any material without the following characteristics:

(a) — (b) (text unchanged)

(c) Control of emission of the gaseous combustion products. (See also ["incineration"] *"thermal destruction"* and "thermal treatment".)

(48) — (66) (text unchanged)

(67) "Thermal treatment" means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also ["incinerator"] *"hazardous waste incinerator"* and "open burning".)

(68) — (74) (text unchanged)

(74-1) *"Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facilities' property boundary.*

[(74-1)] *(74-2)* — [(74-2)] *(74-3)* (text unchanged)

(75) — (77) (text unchanged)

10.51.02 Identification and Listing of Hazardous Waste

.02 Definition of Solid Waste.

A. — E. (text unchanged)

F. Empty Container.

(1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified in Regulation .17C of this chapter, is empty if:

(a) (text unchanged)

(b) Not more than 2.5 centimeters (1 inch) of residue remain on the bottom of the container *or inner* liner.

(2) — (3) (text unchanged)

.03 Definition of Hazardous Waste.

A. A solid waste, as defined in Regulation .02 is a hazardous waste if:

(1) (text unchanged)

(2) It meets any of the following criteria:

(a) (text unchanged)

(b) It is listed in *Regulations* .14 — .17 and has not been excluded from the lists [in] *by* **COMAR 10.51.01.04** *A and C.*

(c) — (d) (text unchanged)

B. (text unchanged)

.05 Special Requirements for Hazardous Waste Generated by Small Quantity Generators.

A. — F. (text unchanged)

G. If a small quantity generator mixes a solid waste with a hazardous waste that exceeds a quantity exclusion level of this chapter, this mixture is subject to full regulation.

.06 Special Requirements for Hazardous Waste Which is Used, Re-used, Recycled, or Reclaimed, and Residues from Emptied Drums.

A. (text unchanged)

B. A hazardous waste which is a sludge, or which is listed in Regulations .14 — .17, or which contains one or more hazardous wastes listed in Regulations .14 — .17 and which is transported or stored before being used, reused, recycled, or reclaimed, is subject to the following requirements with respect to its transportation or storage:

(1) — (3) (text unchanged)

(4) **COMAR 10.51.05.01** — [05, .07 — .10, and]. .12;

(5) (text unchanged)

.13 Characteristic of EP Toxicity.

A. — B. (text unchanged)

Table I

Maximum Concentration of Contaminants for Characteristic of EP Toxicity

EPA Hazardous Waste Number	Contaminant	Maximum Concentration (milligrams per liter)
D004	Arsenic	5.0
D005	Barium	100.0
D006	Cadmium	1.0
D007	Chromium [(+6)]	5.0
D008	Lead	5.0
D009	Mercury	0.2
D010	Selenium	1.0
D011	Silver	5.0
D012	Endrin (1,2,3,4,10,10-Hexachloro-1 7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1 4-endo, endo-5,8-dimethano naphthalene	0.02
D013	Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer	0.4
D014	Methoxychlor (1,1,1-Trichloro-2,2-bis (p-methoxyphenyl) ethane)	10.0
D015	Taxaphene (C H Cl, Technical chlorinated camphene, 67-69 percent chlorine)	0.5
D016	2,4-D, (2,4-Dichlorophenoxyacetic acid)	10.0
D017	2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	1.0

.14 Lists of Hazardous Wastes: General.

A. — D. (text unchanged)

E. Certain of the hazardous wastes listed in Regulations .15 and .16 have exclusion limits that refer to Regulation .05C[(5)].

.15 Hazardous Waste from Non-specific Sources.

Industry	EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
Generic	F001 — F008	(text unchanged)	(R,T)
	F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (except for *precious* metals electroplating [bath sludges] and spent stripping and cleaning bath solutions).	
	F010 — F011	(text unchanged)	
	F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process (except for precious metals heat treating quenching wastewater treatment sludges).	*(T)*
	F014 — F015	(text unchanged)	
	F024	*Wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor cleanout wastes from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, using free radical catalyzed processes. (This listing does not include light ends, spent filters and filter aids, spent dessicants, wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in Regulation .16.)*	*(T)*

.17 Discarded Commercial Chemical Products, Off Specification (specification) Species, Containers, and Spill Residues of These.

The following materials or items are hazardous wastes if they are discarded or intended to be discarded.

A. — D. (text unchanged)

E. The commercial chemical products, mixtures, or manufacturing chemical intermediates, referred to in §§A — D, are identified as acute hazardous wastes (H) and are subject to the small quantity exclusion defined in Regulation .05C. These wastes and their corresponding EPA Hazardous Waste Numbers are:

HAZARDOUS WASTE NUMBER	SUBSTANCE*
P001 — P085	(text unchanged)
P087	Osmium [tetroxide] *oxide*
P088 — P123	(text unchanged)

E-1. Additionally, the following waste(s) are identified as acute hazardous (H) and are subject to the small quantity exclusion defined in Regulation .05C:

M001	Polychlorinated Biphenyls (PCB) (above 500 PPM)

F. The commercial chemical products or manufacturing chemical intermediates, referred to in §§A, B, and D, are identified as toxic wastes (T) unless otherwise designated and are subject to the small quantity exclusion defined in Regulation .05A and B. These wastes and their corresponding EPA Hazardous Waste Numbers are:

HAZARDOUS WASTE NUMBER	SUBSTANCE
U001 — U053	(text unchanged)
U054	*Crysylic acid*
U055 — U246	(text unchanged)

Appendices I — III (text unchanged)

Appendix IV
Basis for Listing Hazardous Wastes

EPA Hazardous Waste Number	Hazardous Constituents for Which Listed
F001 — F019	(text unchanged)
F024	*Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, chloroethylene, 1, 1-dichloroethane, 1, 2-dichloroethane, trans-1-2-dichloroethylene, 1, 1-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethylene, pentachloroethane, hexachloroethane, allyl chloride (3-chloropropene), dichloropropane, dichloropropene, 2-chloro-1,3-butadiene, hexachloro-1,3-butadiene, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorbenzene, dichlorobenzenes, 1,2,4-trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, toluene, naphthalene*
K001 — K106	(text unchanged)

Appendix V
Hazardous Constituents

Acetaldehycle — p-chloro-m-cresol (text unchanged)

2-Chloro-1,3-butadiene (chloroprene)

1-Chloro-2,3-epoxybutane — 1(o-Chlorophenyl) thiourea (text unchanged)

3-Chloropropene (allyl chloride)

3-Chloropropionitrile — Zinc phosphide (text unchanged)

10.51.03 Standards Applicable to Generators of Hazardous Waste

.01 Purpose, Scope and Applicability.

A. (text unchanged)

B. A generator who treats, stores, or disposes of hazardous waste shall only comply with the following sections of this chapter:

(1) — (3) (text unchanged)

(4) Regulation .06D for additional reporting; [and]

(5) If applicable, Regulation .07B for Farmers[.]; *and*

(6) Regulation .05E for accumulation time.

C. — F. (text unchanged)

G. Regulation by Reference. Reference to 49 CFR is to 49 CFR as it has been adopted as of April 1, 1984.

.02 Hazardous Waste Determination.

A person who generates a solid waste, as defined in COMAR 10.51.02.02, shall determine if that waste is a hazardous waste using the following method:

A. — B. (text unchanged)

Agency Note: Even if the waste is listed, the generator still has an opportunity under COMAR 10.51.02.08A(3) to demonstrate to the

[Administrator] *Secretary* that the waste from his particular facility or operation is not a hazardous waste.

.04 The Manifest.

A. General Requirements.

(1) A generator who transports, or offers for transportation, hazardous waste for off-site treatment, storage, or disposal shall prepare [a] *an approved* manifest before transporting the waste off-site.

(2) — (5) (text unchanged)

B. Required Information.

(1) The manifest shall contain all of the following information:

(a) — (d) (text unchanged)

(e) The description of the waste [or wastes] (for example, proper shipping name, etc.) required by regulations of the U.S. Department of Transportation in 49 CFR 172.101, 172.202, and 172.203, *May 22, 1980*;

(f) (text unchanged)

(2) (text unchanged)

C. (text unchanged)

D. Use of the Manifest.

(1) The generator shall:

(a) (text unchanged)

(b) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; [and]

(c) Retain one copy, in accordance with Regulation .06A(1); *and*

(d) (text unchanged)

(2) — (3) (text unchanged)

E. Supplemental Information. When the following information is not included on the manifest a generator shall forward to the Department within 5 days the:

(1) Manifest document number;

(2) Generator's I. D. number;

(3) Transporter's I. D. number (vehicle certification number);

(4) Transporter's telephone number;

(5) Second transporter's I. D. number (if applicable);

(6) Second transporter's telephone number;

(7) Facility's I. D. number;

(8) Facility's telephone number;

(9) EPA or State hazardous waste number;

(10) EPA hazard codes;

(11) Physical state of waste;

(12) Constituent percentages;

(13) Chemical names;

(14) Handling codes; and

(15) Other information that may be required.

.05 Pre-Transport Requirements.

A. — D. (text unchanged)

E. Accumulation Time.

(1) A generator may accumulate hazardous waste on-site without a permit for 90 days or less if:

(a) (text unchanged)

(b) The waste is placed in containers which meet the standards of §A and are managed in accordance with COMAR 10.51.05.09 [E, F, H, and I] or in tanks, provided the generator complies with the requirements of COMAR 10.51.05.10 except for the requirements of COMAR 10.51.05.10C;

(c) — (e) (text unchanged)

(2) (text unchanged)

.06 Recordkeeping And Reporting.

A. Recordkeeping.

(1) (text unchanged)

(2) A generator shall keep a copy of each Annual Report and Exception Report for a period of at least 3 years *from the date of the report.*

(3) — (4) (text unchanged)

B. Annual Reporting.

(1) A generator who ships his hazardous waste off-site shall submit Annual Reports:

(a) On [EPA form 8700-13,] *State form 8700-13A* according to the instructions on the form (See the Appendix of this chapter);

(b) — (c) (text unchanged)

(2) Any generator who treats, stores, or disposes of hazardous waste on-site shall submit an Annual Report covering those wastes in accordance with the provisions of COMAR 10.51.05 *and COMAR 10.51.07.*

C. Exception Reporting.

(1) — (2) (text unchanged)

(3) If the designated facility is located out-of-State in a state which administers the federal program, the generator who does not receive a copy of the manifest as described in §C(1), shall submit an Exception Report to that state's approving authority as specified in §C(2). If that state's program is administered by the EPA, the Report shall be forwarded to the [Administrator of the EPA.] *EPA Regional Administrator for the Region in which the designated facility is located.*

D. (text unchanged)

.07 Special Conditions.

A. International Shipments.

(1) (text unchanged)

(2) When shipping hazardous waste outside the United States the generator shall:

(a) Notify the Secretary and the EPA in writing 4 weeks before the initial shipment of hazardous waste to each country in each calendar year. The waste shall be identified by its EPA hazardous waste identification number and its DOT shipping description. *The name and address of the foreign consignee shall be included in this notice, and these notices shall be sent to the Office of International Activities (A-106), United States Environmental Protection Agency, Washington, D. C. 20460.*

(b) — (c) (text unchanged)

(3) — (4) (text unchanged)

B. (text unchanged)

10.51.04 Standards Applicable to Transporters of Hazardous Waste

.01 General.

A. Scope.

(1) These regulations establish standards which apply to persons transporting hazardous waste within the State if the transportation requires a manifest under COMAR 10.51.03.

(2) These regulations do not apply to on-site transportation of hazardous waste by generators or by owners or operators of permitted hazardous waste management facilities.

(3) A transporter of hazardous waste shall also comply with COMAR 10.51.03, Standards Applicable to Generators of Hazardous Waste, if he:

(a) Transports hazardous waste into the United States from abroad; or

(b) Mixes hazardous waste of different DOT shipping descriptions by placing them into a single container.

B. EPA Identification Number.

(1) (text unchanged)

(2) A transporter who has not received an EPA identification number may obtain one by applying to the Secretary *using EPA Form 8700-12.* Upon receiving the request, the Secretary shall assign an EPA identification number to the transporter.

C. Certificate.

(1) — (6) (text unchanged)

[(7) Health care facilities licensed by the Department of Health and Mental Hygiene are certified CHS transporters.]

[(8)] *(7)* — [(9)] *(8)* (text unchanged)

D. — F. (text unchanged)

.02 Compliance with the Manifest System and Recordkeeping.

A. The Manifest System.

(1) — (4) (text unchanged)

(5) The requirements of §A(3) [and] (4) *and (6)* do not apply to water (bulk shipment) transporters if:

(a) — (e) (text unchanged)

(6) Requirements. For shipments involving rail transportation, the requirements of [§A(5)(c) — (e)] *§A(3) — (5)* do not apply. The following requirements do apply:

(a) — (f) (text unchanged)

(7) (text unchanged)

B. (text unchanged)

C. Recordkeeping.

(1) — (2) (text unchanged)

(3) For shipments of hazardous waste by rail within the [United States] *State* the following apply:

(a) — (c) (text unchanged)

(4) — (5) (text unchanged)

.03 Hazardous Waste Discharged.

A. — B. (text unchanged)

C. All references to 49 CFR in this regulation mean 49 CFR as it has been adopted as of April 1, 1984.

10.51.05 Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.

.01 General.

A. Purpose, Scope and Applicability.

(1) — (2) (text unchanged)

(3) The requirements of this chapter do not apply to:

(a) — (f) (text unchanged)

(g) The owner or operator of an elementary neutralization unit or a wastewater treatment unit [who is granted a permit by rule under 40 CFR 122.26(d) except that requirements of this Part are referred to in 40 CFR 266.15];

(h) Persons with respect to those activities which are carried out to immediately contain or treat a spill of hazardous waste or material which, when spilled, becomes a hazardous waste, except that, with respect to these activities, the appropriate requirements of [COMAR 10.51.03 — .04] *COMAR 10.51.05.03 and .04* are applicable to owners and operators of treatment, storage, and disposal facilities otherwise subject to this part. (Comment. This paragraph only applies to activities taken in response to a spill. After the immediate response activities are completed, the applicable regulations of this chapter apply fully to the management of any spill residue or debris which is a hazardous waste under COMAR 10.51.02;

(i) The owner or operator of a publicly owned treatment works (POTW's) complying with the following regulations in this chapter:

(i) .02 B, and

(ii) .05 B, C, D(1) and (2) (a), F and G.

B. (text unchanged)

C. Regulation by Reference.

(1) Reference to Regulation .08 of this chapter is as of February 3, 1984.

(2) Reference to 40 CFR 264.140 — .151 is as of April 16, 1982.

(3) Reference to 40 CFR 265 is as of April 1, 1984.

.02 General Facility Standards.

A. — C. (text unchanged)

D. General Waste Analysis.

(1) (text unchanged)

(2) Written Analysis.

(a) The owner or operator shall develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with §D(1), above. He shall keep this plan at the facility. At a minimum, the plan shall specify:

(i) — (ii) (text unchanged)

(iii) The sampling method which will be used to obtain a representative sample *of the waste to be analyzed. A representative sample* may be obtained using either:

(aa) — (bb) (text unchanged)

(iv) — (vi) (text unchanged)

(b) (text unchanged)

E. (text unchanged)

F. General Inspection Requirements.

(1) (text unchanged)

(2) Development of Written Schedule.

(a) — (c) (text unchanged)

(d) The frequency of inspection may vary for the items on the schedule. However, it should be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident of the deterioration or malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, shall be inspected daily when in use. At a minimum, the inspection schedule shall include the items and frequencies called for in Regulations .09E, .10D, .11E, .12D-1, *.14C, .15D, and* [.151.] *.15-1I.*

G. — H. (text unchanged)

.05 Manifest System, Recordkeeping, and Reporting.

A. — F. (text unchanged)

G. Unmanifested Waste Report. If a facility accepts for treatment, storage, or disposal any hazardous waste from *an off-site source without* an accompanying manifest, or without an accompanying shipping paper as described in COMAR 10.51.04.02A(5)(b), and if the waste is not excluded from the manifest requirement by COMAR 10.51.02.05 then the owner or operator shall prepare and submit a single copy of a report to the Secretary within 15 days after receiving the waste. The report form and instructions in Appendix II shall be used for this report. The report shall include the following information:

(1) — (7) (text unchanged)

H. (text unchanged)

.06 Ground-Water Protection.

A. Applicability.

(1) — (3) (text unchanged)

(4) Except as provided for in §A(4)(a)—(c) below, the Department adopts as it's requirements for facilities that are excluded from this regulation the federal regulations at 40 CFR 265.90—94, 265.110 .120, 265.220—.230, 265.250—.257, and 265.300—.325, adopted as of April 1, 1984. This will include all hazardous waste landfills, land treatment facilities, surface impoundments and waste piles that received the last volume of hazardous waste before January 26, 1983. The following shall also apply:

(a) Substitute "Secretary" for "Regional Administrator";

(b) Substitute "Department" for "Environmental Protection Agency" or "Agency";

(c) The Department may add additional requirements under this regulation if the Secretary determines that these requirements are necessary to protect public health and the environment.

(5) For purposes of this regulation, "regulated unit" means a facility that received hazardous waste after January 26, 1983.

B.—H. (text unchanged)

I. Detection Monitoring Program. An owner or operator required to establish a detection monitoring program under this section shall, at a minimum, discharge the following responsibilities:

(1)—(7) (text unchanged)

(8) If the owner or operator determines, pursuant to §I(7), that there is a statistically significant increase for parameters or constituents specified pursuant to §I(1) at any monitoring well at the compliance period, he shall:

(a)—(b) (text unchanged)

(c) Establish a background value for each Appendix V constituent that has been found at the compliance point under §I(8)(b) as follows:

(i)—(ii) (text unchanged)

(iii) In taking samples used in the determination of background values, the owner or operator shall use a ground water monitoring system that complies with [§H(7)(a), (3), and (5).] *§H(2)(a), (3), and (5).*

(d)—(e) (text unchanged)

(9)—(11) (text unchanged)

J.—K. (text unchanged)

.07 Closure and Post-Closure.

A. Applicability. Except as Regulation .01 otherwise provides:

(1) (text unchanged)

(2) Sections G.—J. (which concern post-closure care) apply to the owners and operators of all disposal facilities, *including piles and surface impoundments from which the owner or operator intends to remove the waste at closure, to the extent that these sections are applicable.*

B.—C. (text unchanged)

D. Time Allowed for Closure.

(1) (text unchanged)

(2) The owner or operator shall complete closure activities in accordance with the approved closure plan and within 6 months after receiving the final volume of wastes. The Secretary may approve a longer closure period [under §C(3)] if the owner or operator can demonstrate that:

(a) The required or planned closure activities will, of necessity, take him longer than [6 months] *90 days* to complete;

(b)—(d) (text unchanged)

E.—H. (text unchanged)

I. Notice to Local Land Authority. *Within 90 days after closure is completed, the owner or operator of a disposal facility shall submit to the local land authority and to the Secretary a survey plat indicating the location and dimensions of landfill cells or other disposal areas with respect to permanently surveyed benchmarks. This plat shall be prepared and certified by a professional land surveyor. The plat filed with the local land authority shall contain a note, prominently displayed, which states the owner's or operator's obligation to restrict disturbance of the site as specified in §H(3). In addition, the owner or operator shall submit to the Secretary and to the local land authority a record of the type, location, and quantity of hazardous wastes disposed of within each cell or area of the facility. For wastes disposed of before these regulations were promulgated, the owner or operator shall identify the type, location, and quantity of the wastes to the best of his knowledge and in accordance with any records he has kept.* Any changes in the type, location, or quantity of hazardous waste disposed of within each cell or area of the facility that occur after the survey plat and record of wastes have been filed shall be reported within 30 days to the local land authority and to the Secretary.

J. (text unchanged)

.10 Tanks.

A.—C. (text unchanged)

D. Inspections.

(1) The owner or operator of a tank shall inspect, where present:

(a)—(b) (text unchanged)

(c) For uncovered tanks, the level of waste in the tank, at least once each operating day, to ensure compliance with [§B(3)] *§C-1 (2)(b);*

(d)—(e) (text unchanged)

(2) As part of the inspection schedule required in Regulation .02F and in addition to the specific requirements of §E(1) of this regulation, the owner or operator shall develop a schedule and procedures for assessing the condition of the tank. The schedule and procedure shall be adequate to detect cracks, leaks, corrosion or erosion [protection used, rate of corrosion or erosion] which may lead to cracks or leaks, or wall thinning to less than the thickness required under Regulation .10B. Procedures for emptying a tank to allow entry and inspection of the interior shall be established when necessary to detect corrosion or erosion of the tank sides and bottom. The frequency of these assessments shall be based on the material of construction of the tank, type of corrosion or erosion *protection used, rate of corrosion or erosion* observed during the previous inspections, and the characteristics of the waste being treated or stored.

(3) (text unchanged)

E.—H. (text unchanged)

.11 Surface Impoundments.

A.—A-1. (text unchanged)

B. General Operating Requirements.

(1) A surface impoundment shall be operated to prevent any overtopping due to wind and wave action, overfilling precipitation, *or normal or abnormal operations, malfunction of level controllers, alarms, and other equipment, human error.*

(2) A surface impoundment shall maintain enough freeboard to prevent any overtopping of the dyke by overfilling, wave action, *malfunctions of level controlle*

alarms, and other equipment, human error, or a storm. There shall be at least 60 centimeters (2 feet) of freeboard.

(3) — (5) (text unchanged)

C. — E. (text unchanged)

F. Closure and Post-Closure Care.

(1) At closure, the owner or operator shall:

(a) Remove or decontaminate all waste residues, contaminated containment system components (liner, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless **COMAR 10.51.02.03** applies; or he shall do §F(1)[(b) and (c)] *(b) — (e)* if all hazardous waste is not removed or decontaminated;

(b) — (e) (text unchanged)

(2) (text unchanged)

(3) If an owner or operator plans to close a surface impoundment in accordance with §F(1)(a), and the impoundment does not comply with the liner requirements of §C(2) — (5), then:

(a) The closure plan for the impoundment under **COMAR 10.51.05.07B** shall include both a plan for complying with §F(1)(a) and a contingency plan for complying with §F(1)(b) — *(e)* if not all contaminated subsoils can be practicably removed at closure.

(b) The owner or operator shall prepare a contingency post-closure plan under **COMAR 10.51.05.07G** for complying with [paragraph] §F(2) if not all contaminated subsoils can be practicably removed [a] *at* closure.

(c) (text unchanged)

(4) (text unchanged)

F-1. Containment System Repairs; Contingency Plans.

(1) Whenever there is any indication of a possible failure of the containment system, the system shall be inspected in accordance with the provisions of the containment system evaluation and repair plan required by [§H(4).] *§F-1.* Indications of possible failure of the containment system include at least an unplanned and non-sudden drop in the liquid level in the impoundment, liquid detected in the leachate detection system, evidence of leakage or the potential for leakage in the dike, erosion of the dike, apparent or potential deterioration of the liner or liners based on observation or test samples of the liner materials, any mishandling of wastes placed in the impoundment, and foreign objects in the impoundment.

(2) — (6) (text unchanged)

G. — H. (text unchanged)

.12 Waste Piles.

A. — D. (text unchanged)

D-1. Inspections and Testing.

(1) During construction or installation [of the waste pile base] *and immediately after installation:*

(a) Liner systems and covers shall be inspected for uniformity, damage and imperfections (for example, holes, cracks, thin spots, and foreign materials); [and]

(b) Manufactured liner materials and covers (for example, membranes, sheets, and coatings) shall be inspected to ensure tight seams and joints and the absence of tears or blister[.]; *and*

(c) Soil-based and admixed liners and covers shall be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(2) — (3) (text unchanged)

D-2. — G. (text unchanged)

.14 Landfills.

A. Applicability. [The regulations in this chapter] *These regulations* apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as **COMAR 10.51.05.01** provides otherwise.

B. Design and Operating Requirements.

(1) A landfill shall have, or be:

(a) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the landfill to the adjacent subsurface soil or ground water or surface water at any time during the active life, including the closure period, of the landfill. The liner shall be constructed of materials that prevent wastes from passing into the liner during the active life of the facility. The liner shall be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients, including static head *and* external hydrogeologic forces, physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(ii) — (iv) (text unchanged)

(b) — (c) (text unchanged)

(2) — (7) (text unchanged)

C. Monitoring and Inspection.

(1) During construction or installation, liners [except in the case of existing portions of landfills exempt from §B(1)] and cover systems (for example, membranes, sheets, or coatings) shall be inspected for uniformity, damage, and imperfections (for example, holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:

(a) — (b) (text unchanged)

(2) (text unchanged)

D. — I. (text unchanged)

J. Closure and Post-closure Care.

(1) (text unchanged)

(2) After final closure, the owner or operator shall comply with all post-closure requirements contained in **COMAR 10.51.05.07**[F. — I.] *G. — I.*, including maintenance and monitoring throughout the post-closure care period. The owner or operator shall:

(a) — (e) (text unchanged)

K. (text unchanged)

L. Special Requirements for Ignitable or Reactive Waste. Except as provided in §L(2), ignitable or reactive waste may not be placed in a landfill, unless the waste is treated, rendered, or mixed before or immediately after placement in a landfill so that:

(1) (text unchanged)

(2) **COMAR** [10.51.02H(2)] *10.51.05.12*H(2) is complied with.

M. — O. (text unchanged)

.15-1 Thermal Destruction of Hazardous Waste.

A. Definitions.

(1) — (5) (text unchanged)

(6) "Small quantity hazardous waste" means hazardous waste that satisfies the small quantity exclusion at **COMAR 10.51.02.05**[(c)] *C*, except for polychlorinated [biphenals] *biphenyls* (PCB's).

B. — C. (text unchanged)

D. Waste Analysis.

(1) As a portion of the trial burn plan required by **COMAR 10.51.07.02**P(2), or with the permit application, the owner or operator shall include an analysis of the waste

and sufficient to provide all information required by COMAR 10.51.07.02*A(7) and* P(2). Owners or operators of new *hazardous waste* incinerators shall provide the information required by COMAR 10.51.07.02P(3) to the greatest extent possible.

E. — M. (text unchanged)

10.51.07 Permits for CHS Facilities

.01 Permit Required.

A. — C. (text unchanged)

D. Recordkeeping. Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under this chapter for a period of at least 3 years from the date the application is signed.

E. Incorporation by Reference. 40 CFR 264.140 — .151 is incorporated by reference as of April 16, 1982.

.02 Permit Procedure.

A. Application for a Permit.

(1) — (3) (text unchanged)

(4) Permit Information. All applicants, using the application form provided by the Department, shall provide the following information to the Secretary. A duplicate of each application shall be submitted at the same time to the EPA. Information shall be signed in accordance with §A(1), (2) and §B(4).

(a) — (ff) (text unchanged)

(gg) When applicable, a copy of the insurance policy or other documentation which comprises compliance with the requirements of 40 CFR 264.147. For a new facility, documentation showing the amount of insurance meeting the specification of 40 CFR 264.147[a] *A* and, if applicable, 40 CFR 264.147[b] *B*, that the owner or operator plans to have in effect before initial receipt of hazardous waste for treatment, storage, or disposal. A request for a variance in the amount of required coverage, for a new or existing facility, may be submitted as specified in 40 CFR 264.147[D] *C*.

(hh) — (jj) (text unchanged)

(5) Specific Information Requirements. The following additional information is required from owners or operators of specific types of hazardous waste management facilities that are used or to be used for storage , *disposal* or treatment:

(a) — (b) (text unchanged)

(c) For facilities that store , *dispose* or treat hazardous waste in surface impoundments, except as otherwise provided in COMAR 10.51.05.11, the owner or operator shall submit detailed plans and specifications accompanied by an engineering report which shall collectively include the information itemized in sub-paragraphs (i) — [(x)] *(xv)*. For new facilities, the plans and specifications shall be in sufficient detail to provide complete information to a contractor hired to build the facility even if the owner or operator intends to construct the facility without hiring a contractor. For existing facilities, comparable detail shall be provided, but the form of presentation need not assume contractor construction except to the extent that the facility will be modified.

(i) — (xv) (text unchanged)

(xvi) A description of the liner system. If an exemption from the requirement for a liner is sought as provided by COMAR 10.51.05.11A-1.(6), submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time.

(d) For facilities that store or treat hazardous waste in waste piles, except as otherwise provided in COMAR 10.51.05.12.

(i) — (iii) (text unchanged)

(iv) If applicable under COMAR 10.51.05.12C-1, a description of the leachate detection, collection, and removal system including the system's relation to the water table and a description of any efforts to control the water table.

(v) If an exemption from COMAR 10.51.05.16 is sought as provided by COMAR 10.51.05.12B(8)(a), submit detailed plans and an engineering report describing how the requirements of COMAR 10.51.05.12B(8)(a)(i) — (iv) will be complied with.

(vi) A description of how each waste pile, including the liner and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of COMAR 10.51.05.12D and D-1. This information should be included in the inspection plan submitted under COMAR 10.51.07.02A(4)(s).

(vii) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quantity of the residuals.

(viii) If ignitable or reactive wastes are to be placed in a waste pile, an explanation of how the requirements of COMAR 10.51.05.12E will be complied with.

(ix) If compatible wastes, or incompatible wastes and materials will be placed in a waste pile, an explanation of how COMAR 10.51.05.12F will be complied with.

(x) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile upon closure. The owner or operator shall submit detailed plans and an engineering report describing how COMAR 10.51.05.12G will be complied with. This information should be included in the closure plan, and when applicable, the post-closure plan submitted under COMAR 10.51.07.02A(4)(cc).

(xi) If an exemption from COMAR 10.51.05.06 is sought under COMAR 10.51.05.12B(8), submit detailed plans and an engineering report describing how the requirements of COMAR 10.51.05.12B(8)(a)(ii) will be complied with.

(e) For storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with COMAR 10.51.05.09*G(1) and (2) and COMAR 10.51.05.02H(2) and (3), including:*

(i) — (iv) (text unchanged)

[(f) For facilities that store or treat hazardous waste in waste piles, except as otherwise provided in COMAR 10.51.05.12.

(g) For waste piles, except as otherwise provided by §A(5)(h) of this regulation:

(i) A description of practices to control wind dispersal (for example, cover or frequent wetting) of hazardous waste in piles so that the Director, where necessary, can specify appropriate control measures;

(ii) A detailed engineering description of the facility design including a description of measures to divert run-on away from the pile, a description of the leachate and run-off collection and control system, a description of the foundation supporting the base, design specifications of the pile base and liner or liners, including the estimated containment life of the base and the permeability of the liner or liners, estimated life of the hazardous waste pile;

(iii) If applicable under **COMAR 10.51.05.12C-1**, a description of the leachate detection, collection, and removal system including the system's relation to the water table and a description of any efforts to control the water table;

(iv) A detailed description of the facility operation procedures which demonstrate compliance with **COMAR 10.51.05.12E** (ignitable or reactive waste), and **COMAR 10.51.05.12F** (incompatible waste) including a description of efforts to protect the containment system from plant growth which could puncture any component of the system, a description of design and operating procedures to properly manage and dispose of any leachate that is a hazardous waste, a description and listing of all equipment and procedures used to place the waste in or on the pile or to clean and expose the liner surface, and a description of efforts to separate hazardous waste that is incompatible with any waste or material stored nearby including the design specifications of any dike, berm, wall, or other device used to separate the materials.]

[(v) A description of how each waste pile, including the liner and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of **COMAR 10.51.05.12D** and D-1. This information should be included in the inspection plan submitted under **COMAR 10.51.07.02A(4)(t)**.

(iv) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quantity of the residuals.

(vii) If ignitable or reactive wastes are to be placed in a waste pile, an explanation of how the requirements of .12E will be complied with.

(viii) If compatible wastes, or incompatible wastes and materials will be placed in a waste pile, an explanation of how **COMAR 10.51.05.12F** will be complied with.

(ix) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile upon closure. The owner or operator shall submit detailed plans and an engineering report describing how **COMAR 10.51.05.12J(1)** and (2) will be complied with. This information should be included in the closure plan, and when applicable, the post-closure plan submitted under **COMAR 10.51.07.02A(4)(dd)**.]

[(h)] *(f)* Land Treatment. For facilities that use land treatment to dispose of hazardous waste, except as otherwise provided in **COMAR 10.51.05.01**.

(i) — (ii) (text unchanged)

(iii) A description of how the unit is or will be designed, constructed, operated, and maintained in order to meet the requirements of **COMAR 10.51.05.13D**. This submission shall address the following items:

(aa) — (dd) (text unchanged)

(ee) Periodic inspection of the unit. This information should be included in the inspection plan submitted under **COMAR 10.51.07.02**[A(1)(t)]*A(4)(s)*.

(ff) (text unchanged)

(iv) — (viii) (text unchanged)

[(i)] *(g)* (text unchanged)

(6) (text unchanged)

(7) Incineration. For facilities that incinerate hazardous waste, except as **COMAR 10.51.05.15-1B** provides otherwise, the application shall fulfill the [requiremenmts] *requirements* of [§A(6)(a)(b) and (c).] *§A(7) (a) (b) and (c).*

(a) (text unchanged)

(b) Submit a trial burn plan, or the results of a trial burn including all required determinations, conducted in accordance with [**COMAR 10.51.07.03P**, including all determinations required by] **COMAR 10.51.07.02P**.

(c) — (d) (text unchanged)

(8) (text unchanged)

B. (text unchanged)

C. Conditions Applicable to All Permits. The following conditions apply to all permits. All conditions applicable to all permits, and all additional conditions applicable to all permits for individual programs, shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations shall be given the permit.

(1) (text unchanged)

(2) Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. *This application shall be submitted at least 180 days before the expiration date of the effective permit, unless permission for a later date has been granted by the Secretary. This later date may not be later than the expiration date of the effective permit.*

(3) — (11) (text unchanged)

(12) Reporting Requirements.

(a) — (b) (text unchanged)

(c) Transfers. This permit is not transferrable to any person except after notice to the Secretary. The Secretary [may] *shall* require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary.

(d) — (e) (text unchanged)

(f) Twenty-Four Hour Reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. *Both the oral and written reports shall follow the requirements of §N(4) of this regulation. In addition, the* [The] written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(g) — (h) (text unchanged)

D. — I. (text unchanged)

J. Modification or Revocation and Reissuance of Permits.

(1) — (2) (text unchanged)

(3) Causes for Modification or Revocation and Reissuance. The following are causes to modify or, alternatively, revoke and reissue a permit:

(a) Cause exists for termination under §K of this regulation, and the Secretary determines that modification or revocation and reissuance is appropriate;

(b) The Secretary has received notification under §C (12)(c) of a proposed transfer of the permit.

K. — P. (text unchanged)

Q. Permits for Land Treatment Demonstrations Using Field Test or Laboratory Analyses.

(1) General. For the purpose of allowing an owner or operator to meet the treatment demonstration requirements of COMAR 10.51.05.13C, the Secretary may issue a treatment demonstration permit. The permit shall contain only those requirements necessary to meet the standards in COMAR 10.51.05.13C(3). The permit may be issued either as a treatment or disposal permit covering only the field test or

laboratory analyses, or as a two-phase facility permit covering the field tests, or laboratory analyses, and design, construction, operation, and maintenance of the land treatment unit.

(a) The Secretary may issue a two-phase facility permit if he finds that, based on information submitted in the application, substantial although incomplete or inconclusive information already exists upon which to base the issuance of a facility permit.

*(b) If the Secretary finds that not enough information exists upon which he can establish permit conditions to attempt to provide for compliance with all of the requirements of **COMAR 10.51.05.13**, he shall issue a treatment demonstration permit covering the field test or laboratory analyses.*

*(2) Phased Permit. If the Secretary finds that a phased permit may be issued, he will establish, as requirements in the first phase of the facility permit, conditions for conducting the field tests or laboratory analyses. These permit conditions will include design and operating parameters (including the duration of the tests or analyses and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone), monitoring procedures, post-demonstration clean-up activities, and any other conditions which the Secretary finds may be necessary under **COMAR 10.51.05.13C(3)**. The Secretary will include conditions in the second phase of the facility permit to attempt to meet all **COMAR 10.51.05.13** requirements pertaining to unit design, construction, operation, and maintenance. The Secretary will establish these conditions in the second phase of the permit based upon the substantial but incomplete or inconclusive information contained in the application.*

(a) The first phase of the permit will be effective as provided in Regulation .03L(3) of this chapter.

(b) The second phase of the permit will be effective as provided in §Q(4).

(3) Certification. When the owner or operator who has been issued a two-phase permit has completed the treatment demonstration, he shall submit to the Secretary a certification, signed by a person authorized to sign a permit application or report under §B(1) that the field tests or laboratory analyses have been carried out in accordance with the conditions specified in phase one of the permit for conducting the tests or analyses. The owner or operator shall also submit all data collected during the field tests or laboratory analyses within 90 days of completion of those tests or analyses unless the Secretary approves a later date.

*(4) Modifications. If the Secretary determines that the results of the field tests or laboratory analyses meet the requirements of **COMAR 10.51.05.13**, he will modify the second phase of the permit to incorporate any requirements necessary for operation of the facility in compliance with **COMAR 10.51.05.13**, based upon the results of the field tests or laboratory analyses.*

(a) This permit modification may proceed as a minor modification under Regulation .03L provided any change is minor, or otherwise will proceed as a modification under Regulation .03J(1)(b).

(b) If no modifications of the second phase of the permit are necessary, or if only minor modifications are necessary and have been made, the Secretary will give notice of his final decision to the permit applicant and to each person who submitted written comments on the phased permit or who requested notice of the final decision on the second phase of the permit. The second phase of the permit then will become effective as specified in Regulation .03L(3).

(c) If modifications under Regulation .03J(1)(b) are necessary, the second phase of the permit will become effective only after those modifications have been made.

.03 Administrative Procedures.

A. — H. (text unchanged)

I. Public Hearings.

(1) — (4) (text unchanged)

(5) Whenever possible, the Secretary shall schedule a hearing under this section at a location convenient to the nearest population center to the proposed facility.

J. — M. (text unchanged)

ADELE WILZACK
Secretary of Health and Mental Hygiene

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Adele Wilzack, R.N., M.S., Secretary

William M. Eichbaum, Assistant Secretary

June 27, 1984

Ms. Ann Maxfield
Issue Editor
Maryland Register
Division of State Documents
P.O. Box 802
Annapolis, Maryland 21404

Dear Ms. Maxfield:

We request that you place the enclosed Errata in the July 20, 1984 edition of the Maryland Register.

The notification of publication or any questions concerning this Public Notice should be directed to Ms. Gail Castleman of the Program Development Division. Ms. Castleman's telephone number is 383-5740.

Sincerely yours,

Ronald Nelson, Director
Waste Management Administration

RN/eaz

Enclosure

cc: Mr. George Ferreri
Mr. Douglas H. John
Mr. Bernard Bigham

COMAR 10.18.01

At 10:23 Md. R. 2084 (November 11, 1983), col. 2, line 22 from top

FOR: 10.51.01.03 B (26.2)

READ: 10.51.01.03 B (26-2)

COMAR 10.18.02

At 10:23 Md. R. 2084 (November 11, 1983), col. 2, line 6 from top

FOR: COMAR 10.51.07

READ: COMAR 10.51.07

COMAR 10.18.02

At 10:23 Md. R. 2084 (November 11, 1983), col. 2, line 25 from top

FOR: (1) A person may not cause or permit the charge

READ: (1) A person may not cause or permit the discharge

At 10:23 Md. R. 2085 (November 11, 1983), col. 1, line 5 from top

FOR: with COMAR 10.51.05.15

READ: with COMAR 10.51.05. - 1

COMAR 10.51.02

At COMAR, Title V, Supplement 15, Page 2010-2, line 9 from the bottom

FOR: resinate

READ: rinsate

At COMAR, Title V, Supplement 15, Page 2012, line 14 from the bottom

FOR: (a) the growing and harvesting of agricultural manures;

READ: (a) the growing and harvesting of agricultural crops;

At COMAR, Title V, Supplement 15, Page 2021 line 11 from the bottom

FOR: Hazard Code
(I,T)

READ: Hazard Code
(I)

COMAR 10.51.05

At COMAR, Supplement 15, Page 2129, 17 lines from the bottom

FOR: (b) It's use is restricted under §G (3):

READ: (b) It's use is restricted under §G (4)

At COMAR Supplement 15, Page 2133, 6 lines from the top

FOR: requirements of §B (1) and (2)

READ: requirements of §C-1 (1)

COMAR 10.51.07

At COMAR Supplement 15, Page 2224-3, 9 lines from the top.

FOR: comply with COMAR 10.51.05.11A-1(4) and G (1)

READ: comply with COMAR 10.51.05.11A-1(4) and C (1)

At COMAR, Supplement 15, Page 2224-14, 8 lines from the bottom

FOR: 264.147d

READ: 264.147c

At COMAR, Supplement 15, Page 2224-14, 7 lines from the bottom

FOR: when the Secretary demonstrates under 40 CFR 264.147e

READ: when the Secretary demonstrates under 40 CFR 264.147d

At COMAR, Supplement 15, Page 2224-21, 14 lines from the the top

FOR: board (§F), public notice

READ: record (§F), public notice

COMAR 10.51.01

At 10:23 Md. R. 2089 (November 11, 1983), col. 2, lines 22 thru 24 from the bottom

FOR: 10.51.05.15 or 15-1. Examples are notary kiln, hazardous waste incinerators, hazardous waste fluidized bed incinerators

READ: 10.51.04.15 or 15-1. Examples are rotary kiln hazardous waste incinerators, fluidized bed hazardous waste incinerators.

COMAR 10.51.02

At 10:23 Md. R. 2090 (November 11, 1983) col. 2, line 26 from the bottom

FOR: of COMAR 10.51.05.15

READ: of COMAR 10.51.05.15-1

COMAR 10.51.05

At 10:23 Md. R. 2093 (November 11, 1983) col. 2, line 17 from the top

FOR: .12 D-1, and .15 I.

READ: .12 D-1. .14 C, and .15 I.

At 10:23 Md. R. 2100 (November 11, 1983) col. 2, line 15 from the top

FOR: the capacity to receive additional wastes, or

READ: the capacity to receive additional wastes, and

At 10:23 Md. R. 2101, (November 11, 1983) col. 1, line 29 from the top

FOR: (see COMAR 10.51.07.02 J.)

READ: (see COMAR 10.51.07.03 B.)

At 10:23 Md. R. 2102, (November 11, 1983), col. 2, line 24 from the bottom

FOR: MAR 10.51.05.07B

READ: MAR 10.51.05.07C

At 10:23 Md. R. 2102, (November 11, 1983), col. 2 line 22 from the bottom

FOR: §F (1) (b)

READ: §(1) (b) - (e)

At 10:23 Md. R. 2102, (November 11, 1983), col. 2, line 17 from bottom

FOR: can be practicably removed a closure

READ: can be practicably removed at closure

At 10:23 Md. R. 2103 (November 11, 1983), col. 1, line 25 from the bottom

FOR: is not subject to regulation under §§ B and C-1

READ: is not subject to regulation under §§ B

At 10:23 Md. R. 2110 (November 11, 1983), col. 1, line 1 from the bottom

FOR: ate" means as

READ: ate" means an

At 10:23 Md. R. 2112 (November 11, 1983), col. 1, line 23 from the top

FOR: hours when good cause for the entrance

READ: hours when good cause for the extension

At 10:23 Md. R. 2112 (November 11, 1983), col. 2, line 33 from the bottom

FOR: (c) Upon release

READ: (c) Upon request

COMAR 10.51.07

At 10:23 Md. R. 2114 (November 11, 1983), col. 2, line 17 from the bottom

FOR: COMAR 10.51.05.11 F (1) (b) and (2)

READ: COMAR 10.51.05.11 F (1) (b)-(d), and (2)

At 10:23 Md. R. 2114 (November 11, 1983), col. 2, line 14 from the bottom

FOR: COMAR 10.51.07.02 A (4) (dd)

READ: COMAR 10.51.07.02 A (4) (cc)

At 10:23 Md. R. 2116 (November 11, 1983), col. 1, line 20 from top

FOR: (viii) If compatible

READ: (viii) If incompatible

At 10:23 Md. R. 2116 (November 11, 1983), col. 1, line 12 from bottom

FOR: submitted under COMAR 10.51.07.02 A (4) (d)

READ: submitted under COMAR 10.51.07.02 A (4) (s)

At 10:23 Md. R. 2116 (November 11, 1983), col. 1, line 4 from bottom

FOR: plans submitted under COMAR 10.51.07.02 A (4) (dd)

READ: plans submitted under COMAR 10.51.07.02 A (4) (cc)

At 10:23 Md. R. 2116 (November 11, 1983), col. 2, line 22 from top

FOR: 10.51.07.02 A (4) (jj)

READ: 10.51.07.02 A (4) (ii)

At 10:23 Md. R. 2116 (November 11, 1983), col. 2, line 32 from top

FOR: graphic map required under COMAR 10.51.07.02 A (4) (jj);

READ: graphic map required under COMAR 10.51.07.02 A (4) (ii);

At 10:23 Md. R. 2117 (November 11, 1983), col. 1, line 9 from bottom

FOR: § A (6) (a) (b) (c)

READ: § A (7) (a) (b) (c)

At 10:23 Md. R. 2117 (November 11, 1983) col. 2, line 8 from bottom

FOR: pressure, and floe

READ: pressure, and flow

At 10:23 Md. R. 2117 (November 11, 1983) col. 2, line 3 from bottom

FOR: those items listed in § A (7) (c) (i) (aa)

READ: those items listed in § A (7) (c) (i)

At 10:23 Md. R. 2118 (November 11, 1983) col. 1, line 32 from top

FOR: (ii) Proposed waste fed

READ: (ii) Proposed waste feed

At 10:23 Md. R. 2118 (November 11, 1983) col. 1, line 29 from bottom

FOR: ted in A (7) (c) (i) (aa)

READ: ted in A (7) (c) (i)

At 10:23 Md. R. 2118 (November 11, 1983) col. 1, line 19 from bottom

FOR: adequate to specify, under COMAR 10.51.05.15 1-H

READ: adequate to specify, under COMAR 10.51.05.15 - 1 F

At 10:23 Md. R. 2118 (November 11, 1983) col. 1, line 17 from bottom

FOR: dards in COMAR 10.51.05.15 1-F

READ: dards in COMAR 10.51.05.15-1 F

At 10:23 Md. R. 2120 (November 11, 1983) col. 1, line 10 from bottom

FOR: 10.51.05.15 1-F

READ: 10.51.05.15-1F

At 10:23 Md. R. 2122 (November 11, 1983) col. 2, line 25 from top

FOR: evidence of the exemption under COMAR 10.51.05.15 B (2)

READ: evidence of the exemption under COMAR 10.51.05.15-1 B (2)