PROPOSED RULEMAKING

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CHS. 250, 287—289, 291, 295, 297 AND 299]

Residual Waste

The Environmental Quality Board (Board) proposes to amend Chapters 287—289, 291, 295, 297 and 299. The Board also proposes to amend § 250.9 (relating to interaction with other environmental statutes) of the regulations governing the administration of the land recycling program. The proposed amendments are the result of the Department of Environmental Protection (Department) evaluating the residual waste regulations promulgated in 1992 in accordance with the Regulatory Basics Initiative (RBI).

This proposal was adopted by the Board at its meeting of June 16, 1998.

A. *Effective Date*

These amendments will go into effect upon publication in the *Pennsylvania Bulletin* as final rulemaking.

B. *Contact Persons*

For further information contact William F. Pounds, Chief of the Division of Municipal and Residual Waste, P. O. Box 8472, Rachel Carson State Office Building, Harrisburg, PA 17105-8472, (717) 787-7564, or Michelle M. Moses, Assistant Counsel, Bureau of Regulatory Counsel, P. O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Information regarding submitting comments on this proposal appears in Section J of this Preamble. Persons with a disability may use the AT&T Relay Service by calling (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This proposal is available electronically through the Department's Web site (http://www.dep.state.pa.us).

C. *Statutory Authority*

The proposed rulemaking is being made under the authority of the following:

The Solid Waste Management Act (SWMA) (35 P. S. §§ 6018.101—6018.1003), which in section 105(a) of the SWMA (35 P. S. § 6018.105 (a)) grants the Board the power and the duty to adopt the rules and regulations of the Department to carry out the provisions of the SWMA.

The Clean Streams Law (CSL) (35 P. S. §§ 691.1—691.1001), which in section 5(b) of the CSL (35 P. S. § 691.5(b)) grants the Department the authority to formulate, adopt, promulgate and repeal the rules and regulations as are necessary to implement the provisions of the CSL and which in section 402 of the CSL (35 P. S. § 691.402) grants the Department the authority to adopt rules and regulations requiring permits or establishing conditions under which an activity shall be conducted for any activity that creates a danger of pollution of the waters of this Commonwealth or that regulation of the activity is necessary to avoid pollution.

The Municipal Waste Planning, Recycling and Waste Reduction Act (Act 101) (53 P. S. §§ 4000.101—4000.1904), which in section 302 of Act 101 (53 P. S. § 4000.302) gives the Board the power and duty to adopt the regulations of the Department to accomplish the purposes and carry out the provisions of this act.

The Pennsylvania Used Oil Recycling Act (PUORA) (58 P. S. §§ 471—480), which in section 480(e) of the PUORA (58 P. S. § 480(e)) grants the Department the authority to issue any rules or regulations under the PUORA.

The Land Recycling and Environmental Remediation Standards Act (Act 2) (35 P. S. §§ 6026.101—6026.909), which in section 104(a) of Act 2 (35 P. S. § 6026.104(a)) authorizes the Board to adopt Statewide health standards, appropriate mathematically valid statistical tests to define compliance with Act 2 and other regulations that may be needed to implement the provisions of Act 2. Section 301(c) of Act 2 (35 P. S. § 6026.301(c)) authorizes the Department to establish by regulation procedures for determining attainment of remediation standards when practical quantification limits set by the United States Environmental Protection Agency (EPA) have a health risk that is greater than the risk levels established in Act 2. Section 303(a) of Act 2 (35 P. S. § 6026.303(a)) authorizes the Board to promulgate Statewide health standards for regulated substances for each environmental medium and the methods used to calculate the Statewide health standards.

The Waste Tire Recycling Act (Act 190) (§§ 6029.101—6029.113), which in section 105(4) of Act 190 (35 P. S. § 105(4)) authorizes the Department to regulate the disposal of waste tires.

The Administrative Code of 1929 (AC) (71 P. S. §§ 510-5, 510-17 and 510-20), which in section 1905-A the AC authorizes the Department to require applicants for permits and permit revisions to provide written notice to municipalities, in section 1917-A of the AC authorizes and requires the Department to protect the people of this Commonwealth from unsanitary conditions and other nuisances, including any condition which is declared to be a nuisance by any law administered by the Department and in section 1920-A of the AC grants the Board the power and the duty to formulate, adopt and promulgate rules and regulations as may be determined by the Board for the proper performance of the work of the Department.

D. *Background and Purpose*

The residual waste program in this Commonwealth was developed under the Pennsylvania SWMA. There are currently no comprehensive Federal regulations governing the management of nonhazardous industrial, mining and agricultural wastes (residual waste). The SWMA of 1980 (P. L., No. 97) (Act 97) authorized the Department to develop and promulgate regulations to manage residual waste. Under Act 97, residual waste generally consists of waste from industrial, mining and agricultural operations, and includes nonhazardous sludge from an industrial, mining or agricultural waste treatment or pollution control facility. On July 4, 1992, the Department promulgated a comprehensive set of regulations for the management of residual waste. The regulations were developed over a long period of time to allow extensive input from the public and the regulated community.

This proposed rulemaking was developed in response to the Secretary's RBI and the Governor's Executive Order 1996-1 which required all departments to reevaluate existing regulations. The RBI requires evaluation of regulations based on the following criteria: agency re-

quirements are no more stringent than standards imposed by Federal law unless justified by a compelling and articulable Commonwealth interest or authorized by State law; requirements are eliminated which are no longer necessary or redundant; performance-based requirements are encouraged; new green technologies are encouraged; a pollution prevention approach is supported; and information is prepared in plain, simple, clear and concise language.

The RBI review process invited the regulated community, local governments, environmental interests and the general public to help the Department identify specific regulations which should be changed based on the RBI criteria. Input was solicited from the Solid Waste Advisory Committee (SWAC), the Pennsylvania Chamber of Business and Industry, the Pennsylvania Waste Industries Association, the Pennsylvania Electric Association, and numerous other groups, individual companies and the public. The opportunity for involvement in this process was noticed in the *Pennsylvania Bulletin* with a 90-day comment period. Evaluation of the residual waste regulations under the RBI criteria resulted in the Department's preparation of eight separate reports. These reports were made available to the general public, the regulated community, local governments and environmental interest groups. In addition, the Department prepared a Comment and Response Document to address the comments received during the RBI evaluation and to identify which regulations would be revised in response to the comments.

The proposed regulatory amendments reflect the changes identified as a result of the RBI process and changes identified as a result of 5 years of experience in implementing the regulations. In addition, the proposed amendments clarify the application of the Act 2 remediation standards, which became effective on August 16, 1997, to residual waste facilities. The Department met with SWAC to discuss changes to the regulations on June 12, 1997, and September 11, 1997. Prior to the September 11 meeting with the full committee, the Department met with a SWAC subcommittee on September 3, 1997, to identify significant issues including the definition of "waste" and other related terms and the interface of the assessment and abatement requirements with the Act 2 remediation standards. The proposed changes were approved by SWAC at its September 11, 1997, meeting.

E. *Summary of Regulatory Requirements*

A description of the proposed amendments is as follows:

Chapter 250. Administration of the Land Recycling Program

Section 250.9. Interaction with other environmental statutes.

After further evaluation of the application of the Act 2 remediation standards to residual waste facilities, proposed amendments have been made to blend the remediation requirements of Act 2 with the abatement standards in the solid waste program. In addition, consideration was given to Federal regulations for municipal waste facilities, which provided further guidance on the issue. In subsection (b), the proposed amendments delete the requirement that groundwater standards in Subchapters B and C apply as part of a Department-approved assessment and abatement plan. This deletion is replaced with proposed standards in §§ 288.257 and 289.267 (relating to abatement plan) of the residual waste regulations. In addition, the standards that must be demonstrated to qualify for liner and leachate treatment system waivers or modifications have been deleted in § 250.9 and inserted in proposed §§ 287.112 and 287.115 (relating to storage impoundments and storage facilities; and filing by permitted facilities). The Act 2 standards that apply at closure have been deleted in this section and added into the final closure requirements in § 287.342 (relating to final closure certification). A new reference to "remediation standards" has been added to be consistent with the terms that are used and defined in the proposed residual waste regulations. Finally, the last sentence in subsection (b) has been deleted to be consistent with the proposed residual waste regulations which no longer include the terms "groundwater parameter" and "human health and environmental protection levels."

Chapter 287. Residual Waste Management—General Provisions

Section 287.1. Definitions.

The Board is proposing to amend certain terms and to add additional terms which assist in the identification of materials which are considered waste and which are not considered waste, such as coproducts. The terms used to help with this determination include the following: "accumulated speculatively"; "byproduct"; "coproduct"; "product"; "reclaimed"; "recycled"; "spent material"; "used or reused"; and "waste." To a large extent, these new and revised terms are identical to terms defined under the hazardous waste program. The existing definition of "waste" was deleted and replaced with language that identifies waste as any discarded material which is recycled or abandoned. The term further defines the circumstances that qualify a material as "abandoned" and explains when materials that are recycled are considered to be waste and are considered not to be waste. A material is not waste when it can be shown to be recycled by being used as an ingredient in an industrial process, when it is determined to be a coproduct or returned to the original process from which it was generated without first being reclaimed or land disposed. Under the proposed definition of "waste," steel slag is not waste if used onsite as a liming agent for acid neutralization or onsite in place of aggregate.

The term "coproduct" has been revised to apply only to materials that are placed directly on the land or are used to produce products that are applied to the land or that are used for energy recovery with a minimum Btu value of 8,000. Examples of activities that involve the application of materials to the land include the placement of roadway aggregate, pipe bedding and construction materials. Under the Federal program, placement of hazardous waste on the land is prohibited. Under the residual waste program, the Department has maintained the opportunity to apply a material to the land through an evaluation process that may result in a coproduct determination. Additional proposed changes to the definition of "coproduct" include the allowance of sizing, shaping or sorting of the material without a permit and the allowance of a material to be considered a coproduct if no product or produced raw material exists for purposes of chemical and physical comparison.

The definitions for "byproduct" and "used or reused" have been modified to be consistent with the definitions for these terms in the Federal hazardous waste program. The definition of "product" has been modified to delete references to off-specification materials as potential coproducts because many of these materials may be excluded from regulation since they may be materials that are not waste when recycled under the definition of "waste." Definitions for "recycled" and "accumulated

speculatively" have been added for clarification of terms used in the waste definition. The definitions for these terms are identical to those found in the Federal hazardous waste program. The terms "expended material" and "waste reclamation" have been deleted and replaced with the terms "spent material" and "reclaimed," which are defined consistently with the Federal hazardous waste program.

Several terms were added, modified or deleted that relate to groundwater abatement and remediation. The Department is proposing to add the following terms to clarify what standards apply to a release that occurs during the operational phase of a facility and that occurs during the closure phase: "abatement standards," "risk-based standard," "background standard," "remediation standards," "secondary contaminants," "site-specific standard" and "Statewide health standard." In addition, a minor change was made to the term "groundwater degradation," by changing the word "levels" to "concentrations," and the term "human health and environmental protection levels" was deleted.

The proposed amendments differentiate between abatement standards and remediation standards. The abatement standards serve as performance standards during operations. If, during operations, groundwater degradation is detected at monitoring points as a result of failed liner or leachate collection systems, groundwater assessment and abatement must be conducted to meet abatement standards. If a liner or leachate collection system fails, the system design must be repaired to prevent future releases and, in addition, performance standards to contain or mitigate the leak must be implemented in order to allow further operation of the facility. The abatement standards serve as the performance standards that must be met if the facility continues to operate.

If, after the facility ceases to accept waste, groundwater degradation exists the release must be remediated to meet one of the remediation standards. One of the primary differences between the abatement and the remediation standards is the application of the site-specific standard. A site-specific standard may be chosen as a remediation standard. This standard may not be used for abatement during the operational phase of the facility because the particular conditions of the site will continue to change, due to continued operations, and the site-specific standard requires an analysis of the risks that exist at the time the remediation is implemented.

The term "risk-based standard" has been added to allow for a risk-based option for cleanup when abatement is triggered during the operational phase of the facility. This standard is consistent with the Federal assessment monitoring and corrective action programs under 40 CFR Parts 257 and 258 (relating to solid waste disposal facility criteria). Although this Federal requirement is not mandatory for the state's residual waste program, the Department is proposing to include it to be consistent with the state's municipal waste abatement program. The terms "background standard," "Statewide health standard" and "site-specific standard" refer to numerical cleanup standards developed under Act 2. The term "remediation standards" refers to those cleanup standards which apply to a release after a facility ceases to accept waste. The term "secondary contaminants" refers to a substance for which a secondary maximum contaminant level exists and no lifetime health advisory level exists.

The term "asbestos containing waste" has been deleted. Only friable asbestos containing waste will continue to be managed as residual waste, in accordance with § 287.2 (relating to scope). Waste such as shingles or floor tiles from the demolition of homes are commonly managed as construction/demolition waste under the municipal waste program.

The definition of "clean fill" has been modified to identify more clearly those uncontaminated materials that qualify as clean fill, and to allow the material to be placed into waters of this Commonwealth if approved by the Department. Soil and other materials managed as clean fill are not waste; however, as required in the existing regulations, a person using the material as clean fill has the burden of proof to demonstrate that the material is clean fill. This language was moved from § 287.101 (relating to general requirements for permits) to the definition for purposes of clarity. The term is defined to allow soil and other materials to qualify as clean fill with de minimis levels of contamination. The Department is developing a guidance document that identifies de minimis levels of contamination and criteria for the unrestricted management of clean fill. In addition, the Department is considering the use of general permits and other permitting mechanisms for the onsite and offsite management of soil and other materials that do not meet the clean fill criteria and de minimis levels of contamination. The general permits may allow the beneficial use of soils and other materials in commercial and industrial areas. The Department is specifically seeking comments on permitting mechanisms that can be used to maximize flexibility in the management of contaminated soils.

The term "dredged material" is proposed to be added to clarify that uncontaminated dredged material can be used as clean fill and to identify waste material that will now be managed as residual waste instead of as municipal waste.

The term "groundwater parameter" has been replaced with the term "waste classification standard" to avoid confusion between groundwater standards and standards that are used to determine the types of waste that can be disposed in Class II and Class III landfills and Class II impoundments.

The definition of "land application" deletes the reference to surface land disposal, a management practice that is no longer available under the residual waste regulations.

The term "municipal-like residual waste" was added to identify a class of waste that qualifies for a streamlined approval process for disposal or processing. The waste must have the same physical and chemical characteristics as residential municipal waste.

The term "scrap metal" has been added to identify those metal parts that may qualify for a permit exemption when processed in a manner that results in beneficial use. The definition for this term is consistent with the definition for the same term in the Federal hazardous waste program.

The term "steel slag" is defined to identify which types of material relating to the slag industry may be excluded from the definition of "waste," based on the process used to produce it and the use of the material after production. Under the definition of "waste," if steel slag is used onsite as a liming agent for acid neutralization or onsite in place of aggregate, the material is not a waste.

The term "special handling waste" has been modified to exclude asbestos-containing waste that is not friable, to delete the word "oil" when referring to hazardous waste

and to delete fuel contaminated soil, waste tires and water supply treatment plant sludges from the definition.

Section 287.2. Scope.

Subsection (b)(3) has been changed to delete the reference to "other" residual waste and to clarify that sewage sludge mixed with a small quantity of residual waste will be managed under the municipal waste regulations. In subsection (c), the reference to hazardous waste "oil" has been removed because that term is no longer used in the hazardous waste program. Autofluff and dredged material have been added for management under the residual waste regulations. In addition, the term "fuel" has been deleted and the regulations clarify that any contaminated soil must be managed under the residual waste regulations. In subsection (d), the word "friable" has been added to indicate that only friable asbestos containing waste is a special handling waste that is managed under the residual waste regulations.

In 1992, the Board promulgated a regulation that requires the management of water supply treatment plant sludges in accordance with the design and performance standards of the residual waste program. The decision to manage the material under the residual waste regulations, instead of the municipal waste regulations, was made to allow for greater flexibility in the disposal, beneficial use and land application of the material. The Department is soliciting comments on whether the material is best managed under the storage, processing and disposal design and performance standards of the residual waste regulations or the municipal waste regulations.

Section 287.8. Coproduct determinations.

This section has been added to clarify the procedure that must be used to determine when a material is a coproduct. This section largely represents the procedure that has been in place by formal Department guidance during the past 4 years to determine whether a proposed coproduct will present a greater threat of harm to human health and the environment than the use of an intentionally manufactured or produced raw material. The procedure has been modified in these proposed amendments to conform with the proposed changes to the coproduct definition. Therefore, the analysis focuses on the application of the proposed coproduct to land or the use of the proposed coproduct for energy recovery. In addition, the procedure has been modified to include an analysis for a proposed coproduct where no product or produced raw material will be replaced. A person who completes a coproduct determination must maintain documentation supporting the determination and make the information available to the Department upon request. Also, documentation supporting the determination must be provided to persons selling, transferring, possessing or using the material.

Duties of Generators

Section 287.9. Industry-wide coproduct determinations.

To facilitate the reuse and marketing of coproducts that have historically been used as an effective substitute for an intentionally manufactured product or produced raw material, the proposed regulations include a new section to allow for the issuance by the Department of industry-wide coproduct determinations for classes of materials. An industry-wide coproduct determination will be based on the consistency of the material's chemical and physical characteristics and on factors concerning the historical use of the material. Any list of Department-approved coproducts will be published in the *Pennsylvania Bulletin*.

Section 287.51. Scope.

In subsection (a), minor word changes are proposed to clarify that compliance with the biennial report and source reduction strategy requirements is required. The requirements in §§ 287.52 and 287.53 (relating to biennial report); and source reduction strategy) dictate when a report must be submitted.

Section 287.52. Biennial report.

Subsection (a) has been changed to delete references to deadlines for submissions that have passed.

Section 287.53. Source reduction strategy.

Subsection (b) has been changed to delete references to deadlines for submissions that have passed.

Section 287.54. Chemical analysis of waste.

Changes to subsections (a) and (g) have been proposed to require a generator to evaluate the leaching potential of the waste and to allow the Department to waive or modify the chemical analysis requirements for municipal-like residual waste.

Section 287.55. Retained recordkeeping.

Proposed changes in subsection (a) indicate that requirements regarding the maintenance and retention of records developed by generators applies to all generators, regardless of the amount of waste they generate.

General Requirements

Section 287.101. General requirements for permits.

Proposed changes to subsection (b)(1) state that mushroom waste may be required to meet the applicable land application, composting, storage and transportation requirements in the residual waste regulations unless the operation is conducted in accordance with the best management practices identified in the Department's manual entitled "Best Practices for Environmental Protection in the Mushroom Farm Community" or as such practices are approved on a case-by-case basis. The Department and the mushroom industry have been working together for the past 5 years to develop a best management practices manual for the management of mushroom waste. The manual has recently become available to the public.

The proposed changes to subsection (b)(2) provide parallel changes for the food processing industry. The Department's "Food Processing Residual Management Manual" was published in 1994 and identifies best management practices for the industry.

Subsection (b)(6), the permit exemption for clean fill, has been deleted. The management of uncontaminated soil and other materials will continue to be subject to the Department's published "Policy and Procedure Establishing Criteria for Use of Uncontaminated Soils, Rock, Stone, Unused Brick and Block, Concrete and Used Asphalt as Clean Fill." This policy is being updated, with consideration to the final land recycling regulations.

In subsection (b)(7), a new permit exemption has been proposed for processing that results in the beneficial use of scrap metal.

Section 287.102. Permit by rule.

A minor change to subsection (a)(3) clarifies that a permittee must prepare as well as maintain any records required.

Section 287.112. Storage impoundments and storage facilities.

Under § 287.112(f)(1)(ii)(A) and (B), changes have been proposed to the demonstration that must be made to qualify for a liner system and leachate treatment system waiver or modification at a storage impoundment. The proposed language incorporates performance standards that are based on numerical standards developed under Act 2. Instead of using groundwater parameters as the performance standards that must be met to qualify for the waivers or modifications, the proposed amendments refer to the Act 2 Statewide health standard. Also, the word "levels" has been changed to "standard" to clarify the reference to the Act 2 background standard.

Section 287.115. Filing by permitted facilities.

Proposed changes to § 287.115(c)(1)(ii)(A) and (B) have been made to the demonstration for a liner system and leachate treatment system waiver or modification at a disposal facility. The proposed language incorporates performance standards that are based on numerical standards developed under Act 2. Instead of using groundwater parameters as the performance standards that must be met to qualify for the waivers or modifications, the proposed regulations refer to the Act 2 Statewide health standard. Also, the word "levels" has been changed to "standard" to clarify the reference to the Act 2 background standard.

In addition, paragraph (4) has been added to limit the availability of the waivers and modifications. The liner and leachate treatment systems may not be modified or waived for areas identified in an application for a new permit or permit modification submitted after July 4, 1997.

Subsection (g) has been added to clarify the steps that must be taken after a facility is required to cease operations in accordance with this section. If required to cease operations, the person or municipality must submit a closure plan under § 287.117 (relating to closure plan). An application for a new permit must be filed to receive, process or dispose of waste.

Section 287.117. Closure plan.

Subsection (b) has been added to provide the flexibility necessary to allow a person or municipality to continue using an existing system or design, such as a monitoring system, if it performs at a level that is equivalent to the applicable regulations. Subsection (j) has been added to identify the remediation standards that apply to solid waste facilities that ceased receiving waste after September 7, 1980 (the effective date of the SWMA). Remediations must be performed in accordance with an approved closure plan, permit or settlement agreement; however, an approved closure plan, permit or settlement agreement may be modified to include the remediation standards in § 287.342(c) (relating to final closure certification).

Section 287.127. Environmental assessment.

Changes have been proposed to this section to clarify the permit application requirements for an environmental assessment and to add a balancing test which identifies how the Department will evaluate the benefits and harms of a facility. These proposed amendments are consistent with recent changes that were made in the municipal waste program. The environmental assessment carries out the Department's obligation under section 102(10) of the SWMA (35 P. S. § 608.102 (10)) to implement PA. CONST. Art. I, § 27 (relating to natural resources and the public estate) which mandates that the Commonwealth protect public resources. This mandate is viewed as requiring a balancing of interests and was further developed in *Payne v. Kassab,* 312 A.2d 86 (Pa. Cmwlth. 1973), aff'd, 361 A.2d 263 (Pa. 1976), *P.E.M.S. v. DER,* 503 A.2d 477 (Pa. 1986) and various later cases.

This section applies to all residual waste permit applications. In subsection (a), the existing regulations identify factors such as traffic, air quality, water quality, wildlife and land use, that must be analyzed in the environmental assessment for potential impacts on the environment, public health and public safety. The proposed amendments include two new factors that must be considered: scenic rivers and national landmarks.

In subsection (b), the proposed amendments specify that the environmental assessment submitted by the applicant must describe the known and potential environmental harms of the proposed project and must include a mitigation plan for each such harm. The Department will assess whether all harms will be mitigated, and the effect of the mitigation measures collectively. This will include evaluating harm that is created in the process of mitigation and harm that is the direct result of the location of the proposed facility.

Proposed subsections (c) and (d) set forth the test that the Department will use to evaluate the information provided in the environmental assessment. The test requires the applicant to demonstrate that the benefits of the project to the public clearly outweigh the known and potential environmental harms that will remain after mitigation. The benefits that will be considered are any social and economic benefits that remain after taking into consideration the known and potential social and economic harms of the project, and any environmental benefits of the project.

Under subsection (c), the test described in the preceding paragraph is required for every application for a noncaptive landfill, disposal impoundment or incinerator because these facilities present a greater threat of long-term harm. Under subsection (d), the test is required of another facility only if another facility has not demonstrated that it will mitigate all environmental harms.

Proposed subsection (e) allows the Department or any other person or municipality to identify potential harms and benefits.

Under new subsection (f), the environmental assessment, including the Department's evaluation under subsections (c) and (d), will occur in Phase I of the permit review. New subsection (g) allows the Department to require submission of a revised environmental assessment if additional harms or potential harms are discovered at a later time in the permit review process.

Section 287.131. Scope.

A minor change, the deletion of the reference to processing or disposal, is proposed for subsection (a).

Section 287.132. Chemical analysis of waste.

In subsection (a), a modification has been proposed for paragraph (1)(v) that requires an applicant to demonstrate that waste to be disposed will not adversely affect a liner or leachate treatment system. In addition, proposed changes to subsection (a) allow a waiver or modification of the chemical analysis for municipal-like residual waste at any permitted facility. Other modifications expand the opportunity for the Department to waive or modify chemical analysis requirements for municipal-like residual waste that is received at a permitted facility (such as, waste used as cover material).

Section 287.133. Source reduction strategy.

The requirement that an applicant for a processing or disposal facility obtain a copy of a source reduction strategy from each generator of waste that will be disposed or processed is clarified by referring to waste "received." This change clarifies, for example, that an application must include the source reduction strategy of a waste generator when the waste is received at a landfill for cover material.

Section 287.134. Waste analysis plan.

Subsection (a) has been modified to clarify that a waste analysis plan is required for waste proposed to be received at a permitted facility. The existing regulations only refer to a waste analysis plan requirement for waste that is disposed. Subsection (b) has been modified to clarify that the management of waste must be consistent with the permit and this article.

Section 287.141. Permit application fee.

Recalculated permit fees have been proposed to reflect current reasonable costs to the Department for providing technical review of applications.

Section 287.151. Public notice by applicant.

Additional notice requirements have been proposed for subsections (a) and (d) to include information in a public notice by the applicant for submission or modification of a closure plan. The following information must be included in a public notice if contamination exists at closure or occurs after closure: a list of contaminants; identification of ongoing abatement measures, if applicable; proposed remediation measures and the proposed remediation standards to be met. Under this proposed rulemaking package, the operator will have the option of selecting one of three remediation standards to address releases that are present after a facility ceases accepting waste. The changes in this notice section inform the public of the option chosen. If the site-specific standard is chosen to remediate a release, a 30-day public and municipal comment period must be included in the notice. During this period, a municipality may request to be involved in the development of the remediation and reuse plans for the site.

Section 287.152. Public notice by Department.

Additional notice requirements have been proposed for subsections (a) and (b) to include information in a public notice by the Department for a submission or modification of a closure plan. The following information must be included in a public notice if contamination exists at closure or after closure: a list of contaminants; identification of ongoing abatement measures, if applicable; proposed remediation measures and the proposed remediation standards to be met. Under this proposed rulemaking package, the operator will have the option of selecting one of three standards for remediating releases that are present after a facility ceases accepting waste. The changes in this notice section inform the public of the option chosen. If the site-specific standard is chosen to remediate a release, a 30-day public and municipal comment period must be included in the notice. During this period, a municipality may request to be involved in the development of the remediation and reuse plans for the site.

Section 287.154. Public notice and public hearings for permit modifications.

This section has been amended to revise those activities that necessitate a major permit modification. A major permit modification is necessary where there will be a significant change to the design or operation of a disposal or processing facility. Several proposed changes have been made to this section. In subsection (a)(2), the proposed amendments clarify that a change in daily volume requiring a major permit modification includes a change in the average or maximum daily waste volumes. This clarification corresponds with the new sections added (§ 288.138 (relating to daily volume) and § 289.137 (relating to daily volume)) that require average and maximum daily volumes to be identified in landfill and disposal impoundment permit applications. In subsection (a)(3), the current regulations require a major modification when there are changes proposed to the design contours. In many instances minor changes to facility contours are necessary during construction of the facility. The proposed amendments modify this requirement to require a major modification for contour changes when the redesign will result in increased capacity or impact to groundwater.

In subsections (a)(5) and (7) and (b)(2), the replacement of groundwater monitoring wells and the addition of gas monitoring wells will no longer require major permit modifications since these measures will improve the existing design or operation of the facility. In subsection (a)(6), minor changes to the design and operation of the leachate collection and treatment plan, such as changes to the leachate collection piping configuration, will no longer be considered major permit modifications. Changes to the leachate treatment method, however, will be major permit modifications since they represent significant changes.

Under subsection (a)(8), changes to daily, intermediate and final cover requirements will no longer require major permit modifications. This paragraph has been deleted because in many instances changes in cover are necessary due to economic considerations or design and material availability considerations and do not effect the operation of the facility.

Under newly renumbered subsections (a)(10) and (b)(6), changes to a design that have been approved through a major permit modification for an equivalency review will no longer require additional major modifications for use at additional facilities. This change will streamline the approval process for commonly used alternative materials, as long as the operator demonstrates that the alternative design will work at a particular facility.

A new subsection (a)(11), has been added that requires a major permit modification for the submission of an abatement plan. These plans will require detailed review by the Department. Input from the public is necessary since the public may be directly affected by the abatement standard chosen.

In subsection (b)(1), the requirement has been modified to require a major permit modification for a change in specifications or dimensions of waste storage areas if the change results in an increase in processing or storage capacity.

Section 287.202. Completeness review.

New language has been proposed for subsection (a) that clarifies that separate submissions of the Phase I and Phase II parts of the application will not independently be considered to be administratively complete until both parts are determined to be administratively complete.

Section 287.211. Term of permits.

Proposed changes to subsection (c) clarify that a permit term, which is specified as a condition in a permit, is that

period of time when disposal or processing activities are authorized. The permit continues to exist after expiration of the permit term for purposes of completing closure and postclosure activities and all other requirements under the SWMA and the environmental protection acts as defined in § 287.1.

Proposed changes to subsection (e) clarify that if no residual waste is processed or disposed under a permit within 5 years of the date of issuance by the Department, the permit is void. For example, if an operator has both a disposal and a processing permit for one facility, but has only operated under the processing permit (such as, has not received waste for disposal), the disposal permit will become void.

Section 287.212. Conditions of permits—general and right of entry.

A new subparagraph has been added to this section that requires, as a condition of a permit, that a permittee notify the Department of the transfer of a controlling interest in the permittee. The notice will alert the Department to potential compliance history problems. By including this permit condition, the Department will be kept apprised timely of changes of parties in control of facility operations.

Section 287.221. Permit reissuance.

This section has been revised to clarify that a transfer, assignment or sale of rights granted under a permit may not be made without obtaining permit reissuance. No substantive change has been made to this section.

Section 287.222. Permit modification.

A new subsection (c) has been proposed to allow the Department to make timely decisions in the field regarding modifications to the construction of liner systems or of erosion and sedimentation control devices. These decisions on minor permit modifications may only be made if it is impracticable to comply with subsections (a) and (b) and if the modification will improve the permitted design.

Section 287.231. Equivalency review procedure.

A proposed change in subsection (e) will allow an alternative design that is approved once through a major permit modification for one applicant to be applied by another applicant through a minor permit modification. This change was made because the first equivalency review demonstrates that the design meets the performance standards of the regulations. Subsequent reviews are limited to the application of that design to a particular facility and can adequately be accomplished through a minor permit modification.

Bonding Requirements

Section 287.341. Release of bonds.

Several changes have been proposed for subsection (g). In paragraph (1), the phrase "including long-term maintenance of remediation measures" has been added to clarify that a bond will not be released if the remediation measure chosen when a release exists at closure will require ongoing maintenance. For example, a bond amount must be maintained that covers the maintenance costs of an ongoing pump and treat system for contaminated water.

In paragraph (2), the conditions of an owner or operator's liability to restore groundwater have been changed to reflect consistency with the land recycling program. The phrase "background conditions" has been deleted and replaced with the obligation to restore the groundwater to remediation standards and to maintain groundwater quality, at a minimum, at those levels.

Paragraph (4) has been proposed to be deleted because the obligation to achieve background levels has been replaced with the obligation to meet a remediation standard under the land recycling program if a release occurs after closure.

Section 287.342. Final closure certification.

In subsection (b), changes have been proposed to the final closure certification fees to reflect current reasonable costs to the Department for providing technical review of the final closure. Proposed changes in subsection (c) identify the new demonstration that must be made by an applicant to receive final closure certification. This new demonstration is consistent with Act 2 and its remediation standards and it replaces the existing requirements that reference groundwater parameters and human health and environmental protection levels. If groundwater degradation exists at closure or occurs after closure, compliance with one of the remediation standards must be demonstrated for final closure certification.

Proposed subsection (d) has been added to indicate that secondary contaminants may be measured, for compliance purposes, at a point beyond the property boundary up to a water source. The compliance point for secondary contaminants is consistent with the land recycling program.

In subsection (g), changes to the conditions of an owner or operator's liability to restore groundwater have been proposed to reflect consistency with the land recycling program. The phrase "background conditions" has been deleted and replaced with the obligation to restore the groundwater to remediation standards and to maintain groundwater quality, at a minimum, at those levels.

Proposed subsection (i) has been added to address when additional remediation must be performed after a final closure certification has been issued. The circumstances are limited to an increase in the risk level beyond the acceptable range due to substantial changes in exposure conditions, such as a change in land use from a nonresidential to a residential use, or the existence of new information about a substance associated with the facility which revises the exposure assumptions beyond the acceptable range. The conditions of this reopener are consistent with the land recycling program.

Section 287.371. Insurance requirements.

Subsection (a) has been changed to delete references to obsolete deadlines for submissions.

Section 287.421. Administrative inspections.

In subsection (b)(1), the language referring to land disposal activities has been deleted to be consistent with the proposed changes in Chapter 291 (relating to land application of residual waste) which eliminate the availability of the surface land disposal waste management practice. In subsection (b)(5), the phrase "beneficial use areas" was added to clarify the intended frequency of inspection for beneficial use activities.

Demonstration Facilities

Section 287.501. Scope.

Proposed changes to this section authorize the approval of a demonstration project for processing or disposal of residual waste at a permitted processing or disposal facility under a permit modification, rather than under an application for a new permit.

Section 287.502. Relationship to other requirements.

Changes have been proposed to the application and operating requirements that apply to demonstration projects. Under the proposed amendments, the Department has greater flexibility to decide when to waive or modify the application or operating requirements under this article. Deletion of the existing regulation has been proposed because it does not allow any exceptions or variances from the requirements.

Section 287.504. Operating requirements.

Proposed changes to paragraph (1) delete the requirement that a demonstration facility may not exceed one acre in size. This change has been proposed because in many instances larger acreage is necessary to demonstrate the technology. The word "annual" has been deleted in paragraph (6) to eliminate redundancy.

Beneficial Use

Section 287.611. Authorization for general permit.

In subsection (e)(7), a new category of unauthorized activity has been proposed under the general permit program: the use of residual waste for construction or operations at a disposal facility. Instead, an approval must be obtained as part of an equivalency demonstration for a disposal facility. This change was made because the use of waste at landfills requires a site-specific determination and should be approved under a mechanism, such as equivalency demonstration, that allows for a site-specific analysis.

A new subsection (g) has been added to indicate that the Department may issue general permits for the use, as construction material, of soil and other materials that do not meet the clean fill criteria. The Department is specifically seeking comments on the use of this permitting mechanism to maximize flexibility in the management of contaminated soils.

Section 287.661. Use of coal ash as structural fill.

Several changes have been proposed for the requirements of coal ash used as structural fill. In subsection (e)(3), the Department may approve a slope greater than 2.5 horizontal to 1.0 vertical based on a demonstration of structural stability. This change provides greater flexibility in the application of the slope requirement. In subsection (e)(8), the buffer of 4 feet between the placement of coal ash and the seasonal high water table has been eliminated. The proposed requirement only prohibits contact between the coal ash and the seasonal high water table. This change has been made because demonstrations through the use of coal ash for other activities have proven to be effective without this buffer. In subsection (e)(9), the word "permanent" has been replaced with "regional" in reference to the water table because "regional groundwater table" is a defined term in the regulations.

In subsection (f)(2), the proposed change prohibits the placement of coal ash for structural fill within 300 feet of a water source unless the operator obtains a waiver from the water source's owner allowing for another distance. This change was made to allow for greater flexibility where the owner of the water source does not object to the activity. Existing subsection (f)(3), which prohibited placement of coal ash within 500 feet upgradient of a surface water source, has been deleted because the water source buffer requirement provides adequate protection and other controls, such as erosion and sedimentation control requirements, must be met at these sites to protect surface water. Also, existing subsection (f)(7), which prohibits placement of coal ash in or within 300 feet of an exceptional value wetland, has been relaxed to a 100-foot distance to any wetland because the construction activities associated with the use of coal ash as structural fill include measures to protect wetlands.

Chapter 288. Residual Waste Landfills

Application Requirements

Section 288.112. Facility plan.

Amendments have been proposed to this section to reduce unnecessary and redundant information. Paragraph (2) will now focus on the amount of soil needed to construct and operate the facility because this information is important for purposes of calculating the bond.

Section 288.113. Maps and related information.

Proposed changes in subsection (a) allow the Department to approve the use of a different horizontal scale than 1 inch equals no more than 200 feet for all facilities, not just those larger than 250 acres. Deletion of subsection (c), the requirement for a map or aerial photograph of the soil types, test pits and excavations taken under § 288.124 (relating to soil description) on the proposed permit area and adjacent area, has been proposed because the information has not proven useful for purposes of making a permit decision.

Section 288.122. Geology and groundwater description.

New subsection (a)(8) and (9) have been proposed to require the identification of wellhead protection areas that may be impacted by the facility and to require the submission of a groundwater contour map to describe the groundwater flow patterns. These provisions have been added to address wellhead protection regulations in Chapter 109 (relating to safe drinking water), promulgated since 1992, and to address questions frequently raised by applicants and operators on background hydrogeologic information.

Section 288.124. Soil description.

Subsection (a) has been revised to replace the requirement to provide a description of the soils in the permit application with the requirement for applications for Class I or Class II landfills to describe the depth to the seasonal high water table in order to demonstrate that it will not be in contact with the liner system. The soil information currently required is not necessary for lined landfills because lined landfills do not rely on soil attenuation. In subsection (a)(1), the demonstration that there is no contact with water is necessary to preserve the integrity of the liner system or attenuation base. In subsection (a)(2), the addition of the chemical description is necessary for soils that are not clean fill. The soils description will only be required for unlined or natural attenuation landfills, as indicated in subsection (b).

Section 288.127. Mineral deposits information.

This section currently requires a permit applicant to demonstrate that it owns the recoverable or mineable coals underlying the permit area and adjacent area and to warrant that the applicant will not mine the coal as long as residual waste remains on the site. Subsection (b) has been revised to expand the coverage from coal to all mineable minerals to protect landfills from potential instability problems associated with mining activities. In addition, new language has been proposed to exempt expansions of captive facilities permitted prior to July 4, 1992, from the mineral deposits requirements in subsection (b). This revision will allow the expansion of captive facilities on adjacent areas rather than locating new disposal sites.

Section 288.128. Notification of proximity to airport.

This proposed rulemaking includes a new section to require that a residual waste landfill permit applicant notify the Federal Aviation Administration, the Department and the airport if the proposed facility is within 5 miles of an airport runway end. This requirement only applies to facilities that plan to receive putrescible waste. This proposed amendment is added to be consistent with the Federal Subtitle D criteria for municipal waste disposal facilities (40 CFR Part 258) and to facilitate greater input on the feasibility of the location of the landfill.

Section 288.132. Operation plan.

Proposed changes to paragraph (1) require the applicant to include a plan for the inspection and monitoring of incoming waste to help ensure that waste not approved for receipt by the facility is not received and that waste will be rejected or specially addressed if it poses a problem. Paragraphs (3) and (4), which are the requirements to describe the type and size of equipment to be used at the facility and the plan for hiring and training personnel, have been deleted in this proposed rulemaking. Proposed changes to paragraph (6) clarify the operating hours of the facility. The amendment clarifies that operating hours include time during which construction and operation activities will occur. This requirement will help the operator and the Department to minimize noise complaints.

Section 288.134. Plan for access roads.

Amendments to this section have been proposed to require that access roads be designed and constructed to handle truck traffic adequately. This requirement sets a performance standard by which to gauge the adequacy of proposed access roads.

Section 288.136. Nuisance minimization and control plan.

Several proposed changes have been made to this section. The title of this section has been amended to reflect the need to minimize nuisances during the facility planning stages. Subsection (a) has been modified to require that a plan be submitted that describes how nuisances will be minimized and controlled. By planning to control and minimize all nuisances, the expectation is that conditions that give rise to public nuisances will be abated. The Department's focus will be on ensuring the effectiveness of the operator's plan to minimize and control nuisances. Subsection (b) has been added to identify specific items that must be addressed in the plan. The plan must include the following: routine assessment and control of vector infestations; methods to minimize and control nuisances from odors, dustfall and noise levels off the property boundary from the facility; and for odors, a determination of normal and adverse weather conditions, based on site-specific meteorological data. The plan continues to allow the inclusion of contractual arrangements for the services of nuisance control professionals.

Section 288.138. Daily volume.

The proposed amendments include a new section that requires identification in an application of the proposed average and maximum daily volumes for the facility and a detailed justification for the volumes. These volumes are necessary to evaluate traffic, air quality and other potential harms during the environmental assessment review. These requirements currently exist in the municipal waste landfill regulations.

Section 288.141. Compaction and cover plan.

The proposed amendments include amendments to paragraph (3) that reflect changes being made in the operating requirements for cover materials that largely eliminate design requirements in favor of performance standards. Specifically, this section will now require that an applicant specify the materials that will be used as cover and demonstrate that the materials and procedures for applying them will meet the performance standards in §§ 288.232—288.234 (relating to daily cover; intermediate cover and slopes; and final cover and grading). A cross reference to the operating requirements is amended to reflect the deletion of an existing section in the operating requirements. Additionally, in paragraph (5), the requirement that an applicant provide copies of contracts for the cover materials that will be used at the landfill is eliminated.

Section 288.152. Water quality monitoring plan.

Several significant changes have been made to this section based on an overhauling of the groundwater monitoring, abatement and remediation standards. In subsection (a)(2), the proposed amendments require operators of new facilities to provide pre-operational data showing existing groundwater quality in a permit application. For facilities that existed on July 4, 1992, background water quality must be presented in a permit application. "Background," as defined in Act 2, is the concentration of a substance determined by appropriate statistical methods that is present at the site, but is not related to the release of substances at that site. Under subsection (b), the proposed regulations delete all references to the mandatory abatement trigger levels. The proposed amendments require an application to contain procedures and techniques for evaluating analytical results to determine if groundwater degradation has occurred at a monitoring point. Subsections (d) and (e) have been deleted because they pertain to the application of "groundwater parameters" for groundwater monitoring and groundwater parameters are no longer applicable to groundwater abatement and remediation in the residual waste regulations.

Section 288.182. Closure plan.

This section requires that a closure plan describe measures that will be taken toward and after closure. In subsection (a), the proposed amendments delete the reference to a postclosure period and clarify that the plan includes activities that occur toward and after closure. Subsection (b)(3) has been deleted because activities such as capping of cells in stages are considered activities that occur toward closure. Closure occurs only once at a landfill, the date the facility permanently ceases to accept waste. Subsection (b)(4) has been similarly revised to refer to activities that occur toward and after closure. A correlating change has been made to § 288.292(b) (relating to closure). In subsection (b)(4)(vi), additional language has been proposed to specify that the plan include a description of maintenance of access control after closure. This amendment addresses questions concerning maintenance that have been raised in the field.

Operating Requirements

Section 288.201. Basic limitations.

A new subsection (f) has been added that requires all approved mitigation measures identified in the application to be completed before waste may be accepted, unless otherwise authorized in writing by the Department for technical reasons. This requirement bolsters the impor-

tance of effective mitigation, which is stressed in the environmental assessment of § 287.127.

Section 288.202. Certification.

The proposed change to this section adds one item to the list of major construction activities for which the operator must submit a certification by a professional engineer upon completion. The item, in subsection (a)(12), is the construction of the landfill gas extraction system. This is being added because many facilities are developing gas recovery systems and this is a major construction activity.

Section 288.211. Signs and markers.

In subsection (d), proposed changes eliminate the prescriptive language about the size and content of signs and replace the requirement with a performance standard that the sign can be easily seen and read.

Section 288.213. Access roads.

Proposed changes to this section differentiate between access roads leading to the disposal area and those leading to ancillary structures. Subsection (e) has been changed to remove the minimum cartway width for access roads not leading to a disposal area. Subsection (f) has been changed to remove the requirement that an access road to a treatment facility, impoundment or groundwater monitoring point be negotiable by loaded collection vehicles. Subsection (g), which requires that an access road be constructed on a dry and stable area, has been deleted. The performance standards in this section are sufficient to direct the safe construction of access roads. Subsection (h), which contains the prescriptive requirements that any topsoil be removed prior to construction of an access road and be immediately used as final cover or stored, has been deleted. The landfill operator may determine the best use for the soil.

Section 288.214. Measurement and inspection of waste.

The title to this section has been amended to include the inspection of waste. In addition, a new subsection (c) has been added that requires an operator of a landfill to inspect and monitor incoming waste for consistency with this article and the permit and to monitor for radioactive isotopes.

Section 288.215. Equipment.

In subsection (b), the requirement that standby equipment must be located on the site or at a place where it can be available within 24 hours has been deleted. This requirement is redundant of the requirement in subsection (a) that the operator maintain on the site equipment necessary for the operation of the facility in accordance with the permit.

Section 288.216. Unloading and compaction.

In subsection (a), the requirement that waste be compacted in 2 foot depths has been deleted and replaced with a requirement that waste be compacted in accordance with the compaction and cover plan approved in the permit.

Section 288.217. Air resources protection.

Proposed changes to this section clarify the requirements that currently exist in this section. In subsection (a), the changes include the correction of a typographical error ("containment" to "contaminant") and cross referencing the nuisance minimization and control requirements of § 288.218 (relating to nuisance minimization and control). In subsection (a)(3), a requirement to minimize the generation of fugitive dust emissions from the facility has been added. In subsection (b), new language has been added requiring that the operator of a residual waste landfill comply with the terms and conditions of any air quality plan approval and air quality operating permit issued to the facility.

Section 288.218. Nuisance minimization and control.

Several proposed changes have been made to this section. The title of this section has been amended to reflect the need to minimize nuisances during the operational phase of the facility. The nuisance minimization and control plan, approved under § 288.136, should be implemented to control and minimize all nuisances such that conditions that give rise to public nuisances will be abated. Subsection (b) has been modified to require that an operator minimize and control public nuisances. The Department's focus will be on ensuring that the operator implement its nuisance minimization and control plan effectively. The operator will be responsible for minimizing and controlling nuisances as they arise during operations. A new subsection (c) has been added to specifically address the minimization and control of odors. In addition to implementing the nuisance minimization and control plan, the operator must perform site inspections to evaluate the effectiveness of its waste management practices in reducing the potential for offsite odor creation. Also, the operator must promptly address any problems or deficiencies discovered in the course of the site inspections.

Section 288.221. Daily volume.

The proposed amendments include a new § 288.221 to require compliance with the daily volumes approved in the permit and to indicate how the daily volumes are to be calculated. The annual computation of the average daily volume received at a landfill must be included in the operator's annual report. A similar section already exists in the municipal waste regulations.

Section 288.231. Topsoil storage.

This section has been deleted in this proposed rulemaking because the volume of topsoil at these sites is inadequate or, in some cases, nonexistent for use as final cover. The operator is required upon closure to supply the necessary soil. The bond calculations include the price of purchasing acceptable soil, if necessary.

Section 288.232. Daily cover.

The design requirements in subsection (d) are proposed to be deleted and replaced with performance standards. The detailed soil requirements are no longer necessary for purposes of daily cover, especially because the proposed regulations allow for alternatives to soil to be used for daily cover. In addition, the following proposed changes to subsection (c) have been made: first, in paragraph (4), the "noncombustible" performance standard for cover material has been changed to "capable of controlling fires," a standard that is consistent with the municipal waste regulations; and secondly, a new performance standard, paragraph (5), has been added that the cover material shall be consistent with the waste acceptance plan for the facility. The requirement for consistency with the waste acceptance plan takes into consideration the use of wastes as cover materials.

Section 288.233. Intermediate cover and slopes.

Several changes have been proposed to this section. In subsection (b), the operator must demonstrate that the composition of the waste disposed at the facility will not cause erosion, among other existing criteria, to qualify for a waiver of the intermediate cover requirements. The following proposed changes to subsection (c) have been

made: first, in paragraph (4), the "noncombustible" performance standard for cover material has been changed to "capable of controlling fires," a standard that is consistent with the municipal waste regulations; secondly, a new performance standard, paragraph (5), has been added that the cover material shall be consistent with the waste acceptance plan for the facility; thirdly, in paragraph (6), germination and propagation will only be required if it is necessary to control infiltration of precipitation and erosion and sedimentation; and fourth, in paragraph (7), a new standard has been added requiring the control of infiltration of precipitation and of erosion and sedimentation. The requirement for consistency with the waste acceptance plan takes into consideration the use of wastes as cover materials.

As with daily cover, proposed changes to subsection (d) delete most of the design standards for soil and replace them with the performance standards. The detailed soil requirements are no longer necessary for purposes of intermediate cover, especially because the proposed regulations allow for alternatives to soil to be used for intermediate cover. This proposed revision only maintains two design requirements for intermediate cover that are applicable to soil and soil-like materials. Of these two requirements, one has been changed to require that the cover be uniformly "graded" instead of "compacted." Existing subsection (e), which required the maintenance of a 5-day supply of cover material onsite, has been eliminated. Changes in new subsection (e) clarify that if vegetation is to be used it must be established within 30 days. Changes in new subsection (f) additionally require that slopes constructed during intermediate cover activities (not just during landfilling) may not exceed 50%.

Section 288.234. Final cover and grading.

In subsection (a), the prescriptive design standards for the cap have been reduced and performance standards have been added to provide greater flexibility. A new subsection (c) enables an operator to obtain an equivalency review for alternative cap designs. In subsection (e), the final cover placed over the drainage layer will now have to be capable of controlling fires and be consistent with the waste acceptance plan for the landfill. In subsection (f), the design requirement that the combustible or coal content of the cover may not exceed 12% by weight has been proposed to be deleted because it is prescriptive and the requirement for controlling fires is now a performance standard.

Section 288.245. Water supply replacement.

In subsection (a), new proposed language has been included to clarify that when an operator adversely affects a water supply by degradation, pollution or other means, the operator must restore the affected supply. The proposed amendments include a new subsection (d) that explains what qualifies as a permanent water supply for purposes of water supply replacement. Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply, or extension of a private water supply. A permanent water supply does not include provision of bottled water or a water tank supplied by a bulk water hauling system. These proposed changes were made to be consistent with the municipal waste regulations.

Section 288.252. Number, location and depth of monitoring points.

Subsection (b)(3) has been proposed to be modified to require that additional wells be located at the compliance points, which are different from the existing monitoring points. Subsection (e) has been deleted because it is no longer necessary to require that monitoring and compliance wells be drilled by drillers licensed under the Water Well Drillers License Act. Section 288.152 requires that an applicant demonstrate that the monitoring wells will accurately measure groundwater quality. The details of well construction are included in this demonstration. Without specifying who must drill the wells, the Department has maintained the design and performance standards that must be met.

Section 288.253. Standards for wells and casing of wells.

The title of this section has been proposed to be modified to include "wells" to reflect accurately the scope of the section. Subsection (a)(3)(iv) has been deleted to eliminate the requirement that slot openings, design and screen diameter allow for effective well development because it is a common practice in the development of wells. In subsection (a)(5) the requirement that well casings be clearly visible has been added. In subsection (a)(7), the prescriptive design requirement about plastic casings has been deleted and replaced with a requirement that plastic casing be designed and constructed in a manner that prevents cross contamination between surface water and groundwater. In subsection (b)(5), the prescriptive design requirement that a well casing enclosing a monitoring well casing protrude at least 1 inch higher above grade than the monitoring well casing has been deleted. The requirement no longer specifies an exact height the protective casing must protrude above the monitoring well casing.

Section 288.256. Groundwater assessment plan.

In subsection (a), the time available to prepare and submit a groundwater assessment plan has been extended from 30 to 60 days. This proposed change was made because field experience has demonstrated that more time is necessary to evaluate the causes of degradation and to prepare a report explaining exceedances at the monitoring points. Also, a fate and transport analysis must be performed to determine the rate and direction of migration of contaminants in the groundwater. Subsection (a)(2) has been proposed to be deleted because the requirement is outdated. Under subsection (c), new language indicates that if an operator establishes compliance points as part of the assessment, the points shall be constructed in accordance with Sections 288.252 and 288.253 (relating to number, location and depth of monitoring points; and standards for wells and casing of wells). If an operator intends to meet the background standard for remediation, the operator is advised to establish the same points for monitoring and remediation compliance, since compliance with the background standard requires background to be demonstrated in all areas where the contamination occurs. A new subsection (c)(5) has been proposed to be added to require the identification in the assessment plan of the abatement standard that will be met. By requiring this information in an assessment plan, the operator must plan for the likelihood of implementing abatement where the fate and transport analysis indicates there will be a problem.

Section 288.257. Abatement plan.

In subsection (a)(1), the triggers for requiring abatement have been proposed to be revised. "Mandatory abatement trigger levels" have been deleted. Abatement is required when one of the following occurs: 1) the groundwater assessment plan shows the presence of groundwater degradation at the monitoring points (within 200 feet of the permitted disposal area) and the fate and transport

analysis indicates that an abatement standard will not be met; or 2) monitoring by the Department or the operator shows the presence of an abatement standard exceedance from one or more compliance points.

The proposed amendments include a new subsection (c) which establishes the abatement standards that must be met at a landfill. The abatement standards and their points of compliance are identified as follows: 1) for constituents for which a statewide health standard exists, the Statewide health standard for that constituent with compliance points at and beyond 150 meters of the perimeter of the permitted disposal area or at the property boundary, whichever is closer; 2) the background standard for constituents with compliance points at and beyond 150 meters of the perimeter of the permitted disposal area or at the property boundary, whichever is closer; and 3) for constituents for which no primary MCLs under the Federal and State Safe Drinking Water Acts exist, the risk-based standard for that constituent with compliance points at and beyond 150 meters of the perimeter of the permitted disposal area or at the property boundary, whichever is closer.

The risk-based standard has been developed to be consistent with 40 CFR 258.55(i) (relating to assessment monitoring program). The proposed amendments include several factors that must be considered when using a risk-based standard for abatement. The factors identified are as follows: 1) the risk assessment used to establish the standard must assume that human receptors exist at the property boundary; 2) the level must be derived in a manner consistent with Department guidelines for assessing the health risks of environmental pollution; 3) the level must be based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards or other scientifically valid studies approved by the Department; and for carcinogens, the level must represent a concentration associated with an excess lifetime cancer risk of $1 \times 10\text{-}5$ at the property boundary. The risk-based standard may not be used if a state or Federal primary MCL exists for the contaminant in question.

In proposed new subsection (d), the Department may approve a compliance point beyond 150 meters on land owned by the owner of the disposal area for measuring compliance with secondary contaminants when using either the statewide health or risk-based standard.

Section 288.261. Mineral resources.

Proposed changes to subsection (a) delete the prescriptive 25 foot coal seam and coal outcrop isolation distance, replacing it with a requirement that the operator isolate a coal seam, coal outcrop and coal refuse in a manner that prevents combustion of the waste and damage to the liner system.

Section 288.262. Gas control and monitoring.

Proposed changes to subsection (e)(3) delete the standard for gas monitoring in areas adjacent to the permit area. The regulation continues to require the operator to control decomposition gases onsite to prevent danger to occupants of adjacent properties. The onsite monitoring serves as an early warning indicator of potential offsite migration.

Section 288.271. Hazard prevention.

The emergency procedures in this section have been proposed to be modified to delete information already required in the Preparedness, Prevention and Contingency (PPC) Plan.

Section 288.272. Emergency equipment.

Subsection (a)(3) has been proposed to be amended to require that an adequate water supply be available for firefighting equipment.

Section 288.283. Annual operation report.

In subsection (b)(1), the annual operation reporting requirements have been proposed to be modified to require noncaptive residual waste landfills to describe the average daily volume received at the facility since identifying average daily volume is now a requirement for residual waste landfills. In addition, a proposed change in subsection (c) increases the fee that accompanies the annual operation report from $2,500 to $4,600 to cover increases in administrative costs.

Section 288.292. Closure.

In subsection (b), the reference to "partial closure" has been proposed to be deleted and the language has been conformed to be consistent with the changes made to § 288.182 (relating to closure plan).

A new subsection (c) has been added to the proposed rulemaking that gives a person the option to continue to implement an approved abatement plan or modify a closure plan to address groundwater degradation that exists at closure or occurs after closure. If a person chooses to submit a an application for a permit modification, the application must identify the remediation standards that will be met in accordance with the final closure certification requirements in § 287.342 (relating to final closure certification). The Department will accept the selection of remediation standards if technical information and supporting documentation of the remediation activities demonstrate that the standards will be met and maintained and if documentation of cooperation or an agreement is in place with a third party where a remedy relies on access to or use of a third party's property for remediation or monitoring.

Additional Application Requirements for Class I Residual Waste Landfills

Section 288.412. Liner system and leachate control plan.

In subsection (c), the requirement that the leachate demonstration be based on the EPA Method 9090 compatibility test has been replaced with language that allows the demonstration to be based on EPA or ASTM guidelines approved by the Department. This change will allow applicants to keep up with changing standards and technology. Also, in subsection (d)(19), a requirement has been added to identify in the permit application the percent of recycled material in the proposed primary and secondary liners.

Additional Operating Requirements for Class I Residual Waste Landfills

Section 288.422. Areas where Class I residual waste landfills are prohibited.

Several changes have been proposed in this section. First, subsection (a)(4) currently requires that an operator own the underlying recoverable or mineable coal in order to obtain a Class I residual waste landfill permit. The proposed revision would extend the requirement to ownership of all recoverable or mineable minerals. As explained in the discussion of § 288.127, the expanded coverage from coal to all mineable minerals will better protect landfills from potential instability problems associated with mining activities. The proposed revision provides an exemption from this limitation for captive facilities per-

mitted prior to July 4, 1992, to allow for expansions of these facilities on adjacent areas.

Secondly, subsection (a)(7), which refers to distance between occupied dwellings and landfills, is bifurcated for clarity. Subparagraph (i) refers to landfills permitted prior to the date of publication of the final-form regulations in the *Pennsylvania Bulletin,* to expansions of residual waste landfills that were permitted prior to the date of publication of the final-form regulations in the *Pennsylvania Bulletin,* and to captive residual waste *landfills.* In that subparagraph, the reference to "facilities permitted prior to July 4, 1992" is deleted as unnecessary since subsection (a) exempts areas permitted prior to July 4, 1992, in the lead-in language. Subparagraph (ii) refers to residual waste landfills permitted after the date of publication, except for captive residual waste landfills. The proposed amendments extend the isolation distance between landfills and occupied dwellings to 300 yards, from 300 feet. This additional distance will help to reduce complaints from nearby dwellings concerning noise, odors, and nuisances. The requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste treatment facilities. Section 511(c) of Act 101 (53 P. S. § 4000.511(c)) authorizes the Department to establish site limitations by regulation that are in addition to or more stringent than the site limitation between a facility and parks, playgrounds or schools. The same Legislative concerns that apply to setback distances from schools would apply to occupied dwellings. The owner of the dwelling may provide a written waiver consenting to the facility being closer than 300 yards.

In subsection (a)(10), the proposed amendments delete the prohibition against constructing a facility within 25 feet of a coal seam or coal outcrop or of coal refuse. This standard is not necessary because adequate protection from fires can be addressed in the design of the facility. To address fire protection in the facility design, the Department proposes in § 288.261 (relating to mineral resources) to require a landfill operator to isolate coal seams, coal outcrops and coal refuse from waste deposits in a manner that prevents combustion of the waste.

In subsection (a)(11), the proposed amendments amend the isolation distances from airports to reflect the restrictions in the federal Subtitle D (40 CFR Part 258) regulations. Based on the Department's experience with putrescible waste in landfills in the municipal waste program, these proposed amendments establish a site limitation that must be met unless the applicant can demonstrate that the landfill will be designed and operated so that it will not pose a bird hazard to aircraft. Definitions for "airport" and "bird hazard" are included in this section that contain language from the Subtitle D regulations.

Subsection (a)(12) has been added to be consistent with the municipal waste regulations. It provides for an isolation distance between landfills and schools, parks and playgrounds that is 300 yards. This requirement will apply to landfills permitted on or after the date of publication of the final-form regulations in the *Pennsylvania Bulletin.* The property owner of the park, playground or school may provide a written waiver consenting to the facility being closer than 300 yards. Noncaptive landfills permitted prior to the date of publication of these proposed amendments as final in the *Pennsylvania Bulletin* are not intended to be affected by the more stringent isolation distances proposed in this section when reissuance or renewal of the permit, or expansion of the permit area is sought. This requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste treatment facilities. Section 511(c) of Act 101 authorizes the Department to establish site limitations by regulation that are in addition to or more stringent than the site limitation between these facilities and parks, playgrounds or schools. The same Legislative concerns that apply to setback distances from municipal waste landfills for parks, playgrounds and schools would apply to residual waste landfills.

Section 288.423. Minimum requirements for acceptable waste.

A new subsection (a)(6) has been added that prohibits a person from disposing of residual waste at a Class I residual waste landfill unless the physical characteristics of the waste will not cause or contribute to structural instability or other operating problems at the site. This revision has been proposed to ensure the integrity of the liner system.

Section 288.432. General limitations.

In subsection (a), a change has been proposed to the requirement that 4 feet exist between the top of the subbase of the liner system and the seasonal high water table. The revision requires that the bottom of the subbase cannot be in contact with the seasonal high water table or perched water table. The prescriptive buffer between the liner system and the seasonal high water table has been replaced with a performance standard to prevent contact between the two. In subsection (a)(2), the drainage systems may now be used to prevent contact between the bottom of the subbase and the water tables rather than to maintain the 4-foot isolation distance. This change is consistent with the other changes in subsection (a). In subsection (b), the 8-foot isolation distance from the top of the subbase and the regional groundwater table for unconfined aquifers has been changed to the distance from the bottom of the subbase to be consistent with the existing municipal waste regulations in § 273.252(b). In subsection (c), the 8-foot isolation distance for confined aquifers from the top of the subbase to the top of the confining layer or the shallowest level below the bottom of the subbase where groundwater occurs has been changed to the distance from the bottom of the subbase. These changes from the top to the bottom of the subbase have been proposed to clarify questions raised during construction of landfills.

Section 288.433. Subbase.

The design requirements in subsection (b) have been modified to delete the minimum bearing capacity of the subbase and to increase permissible subbase slopes from 25% to 33%. These proposed changes were made because construction on steeper slopes has proven to be effective.

Section 288.434. Secondary liner.

In subsection (b), the words "at the minimum" were added to allow for the use of liners that meet or exceed the design requirements in Appendix A, Table I without an equivalency demonstration.

Section 288.435. Leachate detection zone.

In subsection (b)(5)(ii), the design requirement that the distance between pipes in the piping system for the leachate detection zone not exceed 100 feet on center has been deleted. This change has been proposed because it has not proven necessary for an effective system. In

subsection (f), the language concerning monitoring of the leachate detection zone has been revised to replace "exceedance of mandatory abatement trigger levels" with "groundwater degradation at a monitoring well." This change has been proposed because mandatory abatement trigger levels are proposed to be deleted in this rulemaking. Additionally, in subsection (f)(1), the proposed amendments require that an operator not only submit to the Department a remedial plan for controlling the source of leachate in the leachate detection zone, but also that the operator correct a malfunction or defect in the liner system where groundwater degradation has been detected.

Section 288.436. Primary liner.

In subsection (b), the words "at the minimum" were added to allow for the use of liners that meet or exceed the design requirements in Appendix A, Table I without an equivalency demonstration.

Section 288.438. Leachate collection system within protective cover.

This proposed rulemaking amends subsection (a)(2) to authorize the Department to condition a permit to allow the depth of leachate on or above the primary liner to exceed 1 foot for sump areas because a sump area is used for collection of leachate and frequently exceeds 1 foot of head. An exceedance may also occur for a 25-year, 24-hour precipitation event where the one foot of head will be exceeded for less than 3 days to address exceptional precipitation events. This revision is intended to address two situations in which exceedance of the 1-foot limit should not pose a problem.

Section 288.454. Leachate recirculation.

Subsection (b) has been added to allow the Department to authorize an alternative leachate recirculation method for a facility. This proposed revision will allow, for example, an alternative design where intermediate cover may not be necessary or a piping system is not used.

Section 288.455. Leachate collection and storage.

Proposed changes in subsection (b) allow tank or impoundment storage volumes at captive facilities to be performance based as opposed to always requiring the volume to be based on the expected 30-day flow. Most residual waste landfills are captive facilities and have existing storage and treatment facilities capable of handling the expected leachate flow without increasing storage capacity. A proposed revision to subsection (d) indicates that the storage capacity of impoundments and tanks will be increased if necessary. A new subsection (g) has been added to require secondary containment for pipes that are located outside the lined areas of the facility. This requirement has been added to reduce the likelihood of leaks or releases from the pipes.

Section 288.456. Leachate analysis and sludge handling.

Proposed changes in subsection (a)(2) allow the Department to modify the frequency or chemical constituents of leachate testing if the facility operator demonstrates after four quarters of testing that this will not compromise groundwater protection.

Additional Application Requirements for Class II Residual Waste Landfills

Section 288.512. Liner system and leachate control plan.

In subsection (c), the requirement that the leachate demonstration be based on the EPA Method 9090 compatibility test has been replaced with language that allows the demonstration to be based on EPA or ASTM guidelines approved by the Department. This proposed change will allow applicants to keep up with changing standards and technology. Also, in subsection (d)(19), a requirement has been added to identify in the permit application the percent of recycled material in the proposed primary and secondary liners.

Additional Operating Requirements for Class II Residual Waste Landfills

Section 288.522. Areas where Class II residual waste landfills are prohibited.

Several changes have been proposed in this section. First, subsection (a)(4) currently requires that an operator own the underlying recoverable or mineable coal in order to obtain a Class II residual waste landfill permit. The proposed revision would extend the requirement to ownership of all recoverable or mineable minerals. As explained in the discussion of § 288.127, the expanded coverage from coal to all mineable minerals will better protect landfills from potential instability problems associated with mining activities. The proposed revision provides an exemption from this limitation for captive facilities permitted prior to July 4, 1992, to allow for expansions of these facilities on adjacent areas.

Secondly, subsection (a)(7), which refers to distance between occupied dwellings and landfills, is bifurcated for clarity. Subparagraph (i) refers to landfills permitted prior to the date of publication of the final-form regulations in the *Pennsylvania Bulletin,* to expansions of residual waste landfills that were permitted prior to the date of publication of the final-form regulations in the *Pennsylvania Bulletin,* and to captive residual waste landfills. In that subparagraph, the reference to "facilities permitted prior to July 4, 1992" is deleted as unnecessary since subsection (a) exempts areas permitted prior to July 4, 1992 in the lead-in language. Subparagraph (ii) refers to residual waste landfills permitted after the date of publication, except for captive residual waste landfills. The proposed amendments extends the isolation distance between landfills and occupied dwellings to 300 yards, from 300 feet. This additional distance will help to reduce complaints from nearby dwellings concerning noise, odors, and nuisances. The requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste treatment facilities. Section 511(c) of Act 101 authorizes the Department to establish site limitations by regulation that are in addition to or more stringent than the site limitation between a facility and parks, playgrounds or schools. The same Legislative concerns that apply to setback distances from schools would apply to occupied dwellings. The owner of the dwelling may provide a written waiver consenting to the facility being closer than 300 yards.

In subsection (a)(10), the proposed amendments delete the prohibition against constructing a facility within 25 feet of a coal seam or coal outcrop or of coal refuse. This standard is not necessary because adequate protection from fires can be addressed in the design of the facility.

In subsection (a)(11), the proposed amendments amend the isolation distances from airports to reflect the restrictions in the Federal Subtitle D (40 CFR Part 258) regulations. Based on the Department's experience with putrescible waste in landfills in the municipal waste program, these proposed amendments establish a site limitation that must be met unless the applicant can demonstrate that the landfill will be designed and oper-

ated so that it will not pose a bird hazard to aircraft. Definitions for "airport" and "bird hazard" are included in this section that contain language from the Subtitle D regulations.

Subsection (a)(12) has been added to be consistent with the municipal waste regulations. It provides for an isolation distance between landfills and schools, parks and playgrounds that is 300 yards. The requirement will apply to landfills permitted on or after the date of publication of the final-form regulations in the *Pennsylvania Bulletin*. The property owner of the park, playground or school may provide a written waiver consenting to the facility being closer than 300 yards. Noncaptive landfills permitted prior to the date of publication of these amendments as final-form regulations in the *Pennsylvania Bulletin* are not intended to be affected by the more stringent isolation distances proposed in this section when reissuance or renewal of the permit, or expansion of the permit area is sought. This requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste treatment facilities. Section 511(c) of Act 101 authorizes the Department to establish site limitations by regulation that are in addition to or more stringent than the site limitation between these facilities and parks, playgrounds or schools. The same Legislative concerns that apply to setback distances from municipal waste landfills for parks, playgrounds and schools would apply to residual waste landfills.

Section 288.523. Minimum requirements for acceptable waste.

The phrases "drinking water standard" and "groundwater parameter" are proposed to be changed to "waste classification standard" to be consistent with that term's definition in § 287.1.

A new subsection (a)(12) has been proposed to be added that prohibits a person from disposing of residual waste at a Class I residual waste landfill unless the physical characteristics of the waste will not cause or contribute to structural instability or other operating problems at the site. This revision has been proposed to ensure the integrity of the liner system.

Section 288.532. General limitations.

In subsection (a), a change has been proposed to the requirement that 4 feet exist between the top of the subbase of the liner system and the seasonal high water table. The revision requires that the bottom of the subbase cannot be in contact with the seasonal high water table or perched water table. The prescriptive buffer between the liner system and the seasonal high water table has been replaced with a performance standard to prevent contact between the two. In subsection (a)(2), the drainage systems may now be used to prevent contact between the bottom of the subbase and the water tables rather than to maintain the 4-foot isolation distance. This change is consistent with the other changes in subsection (a). In subsection (b), the 8-foot isolation distance from the top of the subbase and the regional groundwater table for unconfined aquifers has been changed to the distance from the bottom of the subbase. In subsection (c), the 8-foot isolation distance for confined aquifers from the top of the subbase to the top of the confining layer or the shallowest level below the bottom of the subbase where groundwater occurs has been changed to the distance from the bottom of the subbase. These changes from the top to the bottom of the subbase have been proposed to clarify questions raised during construction of landfills.

Section 288.533. Subbase.

The design requirements in subsection (b) have been modified to delete the minimum bearing capacity of the subbase and to increase permissible subbase slopes from 25% to 33%. These proposed changes were made because construction on steeper slopes has proven to be effective.

Section 288.534. Leachate detection zone.

In subsection (b)(4)(ii), the design requirement that the distance between pipes in the piping system for the leachate detection zone not exceed 100 feet on center has been deleted. This change has been proposed because it has not proven necessary for an effective system. In subsection (f), the language concerning monitoring of the leachate detection zone has been revised to replace "exceedance of mandatory abatement trigger levels" with "groundwater degradation at a monitoring well." This change has been proposed because mandatory abatement trigger levels are proposed to be deleted in this rulemaking. Additionally, in subsection (f)(1), the proposed amendments require that an operator not only submit to the Department a remedial plan for controlling the source of leachate in the leachate detection zone, but also that the operator correct a malfunction or defect in the liner system where groundwater degradation has been detected.

Section 288.535. Liner.

In subsection (b), the words "at the minimum" were proposed to be added to allow for the use of liners that meet or exceed the design requirements in Appendix A, Table I without an equivalency demonstration.

Section 288.537. Leachate collection system within protective cover.

This proposed rulemaking amends subsection (a)(2) to authorize the Department to condition a permit to allow the depth of leachate on or above the primary liner to exceed 1 foot for sump areas because a sump area is used for collection of leachate and frequently exceeds one foot of head. An exceedance may also occur for a 25-year, 24-hour precipitation event where the one foot of head will be exceeded for less than 3 days to address exceptional precipitation events. This revision is intended to address two situations in which exceedance of the 1-foot limit for a short time period should not pose a problem.

Section 288.554. Leachate recirculation.

Subsection (b) has been added to allow the Department to authorize an alternative leachate recirculation method for a facility. This proposed revision will allow, for example, an alternative design where intermediate cover may not be necessary or a piping system is not used.

Section 288.555. Leachate collection and storage.

Proposed changes in subsection (b) allow tank or impoundment storage volumes at captive facilities to be performance based as opposed to always requiring the volume to be based on the expected 30-day flow. Most residual waste landfills are captive facilities and have existing storage and treatment facilities capable of handling the expected leachate flow without increasing storage capacity. A proposed revision to subsection (d) indicates that the storage capacity of impoundments and tanks will be increased if necessary. A new subsection (g) has been added to require secondary containment for pipes that are located outside the lined areas of the

facility. This requirement has been added to reduce the likelihood of leaks or releases from the pipes.

Section 288.556. Leachate analysis and sludge handling.

Proposed changes in subsection (a)(2) allow the Department to modify the frequency or chemical constituents of leachate testing if the facility operator demonstrates after four quarters of testing that this will not compromise groundwater protection.

Additional Operating Requirements for Class III Residual Waste Landfills

Section 288.621. Basic requirements.

This section is amended to require that an operator of a Class III residual waste landfill comply with §§ 288.622—288.625. This proposed revision is made to correct a clerical error.

Section 288.622. Areas where Class III residual waste landfills are prohibited.

Several changes have been proposed in this section. First, subsection (a)(4) currently requires that an operator own the underlying recoverable or mineable coal in order to obtain a Class II residual waste landfill permit. The proposed revision would extend the requirement to ownership of all recoverable or mineable minerals. As explained in the discussion of § 288.127, the expanded coverage from coal to all mineable minerals will better protect landfills from potential instability problems associated with mining activities. The proposed revision provides an exemption from this limitation for captive facilities permitted prior to July 4, 1992, to allow for expansions of these facilities on adjacent areas.

Secondly, subsection (a)(7), which refers to distance between occupied dwellings and landfills, is bifurcated for clarity. Subparagraph (i) refers to landfills permitted prior to the date of publication of the final-form regulations in the *Pennsylvania Bulletin*, to expansions of residual waste landfills that were permitted prior to the date of publication of the final-form regulations in the *Pennsylvania Bulletin*, and to captive residual waste landfills. In that subparagraph, the reference to "facilities permitted prior to July 4, 1992" is deleted as unnecessary since subsection (a) exempts areas permitted prior to July 4, 1992, in the lead-in language. Subparagraph (ii) refers to residual waste landfills permitted after the date of publication, except for captive residual waste landfills. The proposed amendments extends the isolation distance between landfills and occupied dwellings to 300 yards, from 300 feet. This additional distance will help to reduce complaints from nearby dwellings concerning noise, odors, and nuisances. The requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste treatment facilities. Section 511(c) of Act 101 authorizes the Department to establish site limitations by regulation that are in addition to or more stringent than the site limitation between a facility and parks, playgrounds or schools. The same Legislative concerns that apply to setback distances from schools would apply to occupied dwellings. The owner of the dwelling may provide a written waiver consenting to the facility being closer than 300 yards.

In subsection (a)(10), the proposed amendments delete the prohibition against constructing a facility within 25 feet of a coal seam or coal outcrop or of coal refuse. This standard is not necessary because adequate protection from fires can be addressed in the design of the facility.

In subsection (a)(11), the proposed amendments amend the isolation distances from airports to reflect the restrictions in the Federal Subtitle D (40 CFR Part 258) regulations. Based on the Department's experience with putrescible waste in landfills in the municipal waste program, these proposed amendments establish a site limitation that must be met unless the applicant can demonstrate that the landfill will be designed and operated so that it will not pose a bird hazard to aircraft. Definitions for "airport" and "bird hazard" are included in this section that contain language from the Subtitle D regulations.

Subsection (a)(12) has been added to be consistent with the municipal waste regulations. It provides for an isolation distance between landfills and schools, parks and playgrounds that is 300 yards. This proposed requirement will apply to landfills permitted on or after the date of publication of the final-form regulations in the *Pennsylvania Bulletin*. The property owner of the park, playground or school may provide a written waiver consenting to the facility being closer than 300 yards. Noncaptive landfills permitted prior to the date of publication of these amendments as final-form regulations in the *Pennsylvania Bulletin* are not intended to be affected by the more stringent isolation distances proposed in this section when reissuance or renewal of the permit, or expansion of the permit area is sought. This requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste treatment facilities. Section 511(c) of Act 101 authorizes the Department to establish site limitations by regulation that are in addition to or more stringent than the site limitation between these facilities and parks, playgrounds or schools. The same Legislative concerns that apply to setback distances from municipal waste landfills for parks, playgrounds and schools would apply to residual waste landfills.

Section 288.623. Minimum requirements for acceptable waste.

The phrase "groundwater parameter" has been changed to "waste classification standard" to be consistent with that term's definition in § 287.1.

A new subsection (a)(14) has been added that prohibits a person from disposing of residual waste at a Class III residual waste landfill unless the physical characteristics of the waste will not cause or contribute to structural instability or other operating problems at the site. This revision has been proposed to ensure the integrity of the liner system.

Section 288.624. Attenuating soil.

The title has been proposed to be revised to delete "base" after "attenuating soil" to clarify that attenuating soil may be used on other portions of the landfill such as the sides. Performance standards have been added for attenuating soil at a Class III residual waste landfill in order to allow the operator to demonstrate the attenuating potential of soils that may not meet the design standards. This has been successfully demonstrated during the repermitting of existing facilities. New technology has proven that varying soil types may be effective.

Appendix A.

The proposed amendments modify Tables I and II. The proposed changes incorporate technological advances that have been made for liners and caps.

Chapter 289. Residual Waste Disposal Impoundments

Application Requirements

Section 289.112. Facility plan.

Amendments have been proposed to this section to reduce unnecessary and redundant information. Paragraph (2) will now focus on the amount of soil needed to construct and operate the facility because this information is important for purposes of calculating the bond.

Section 289.113. Maps and related information.

Proposed changes in subsection (a) allow the Department to approve the use of a different horizontal scale than 1 inch equals no more than 200 feet for all facilities, not just those larger than 250 acres. Deletion of subsection (c), the requirement for a map or aerial photograph of the soil types, test pits and excavations taken under § 289.124 (relating to soil description) on the proposed permit area and adjacent area, has been proposed because the information has not proven useful for purposes of making a permit decision.

Section 289.122. Geology and groundwater description.

New subsection (a)(8) and (9) have been proposed to require the identification of wellhead protection areas that may be impacted by the facility and to require the submission of a groundwater contour map to describe the groundwater flow patterns. These provisions have been added to address wellhead protection regulations in Chapter 109, promulgated since 1992, and to address questions frequently raised by applicants and operators on background hydrogeologic information.

Section 289.124. Soil description.

Subsection (a)(1) has been revised to replace the requirement to provide a description of the soils in the permit application with the requirement for applications to describe the depth to the seasonal high water table in order to demonstrate that it will not be in contact with the liner system. The soil information currently required is not necessary for lined impoundments because lined impoundments do not rely on soil attenuation. In subsection (a)(1), the demonstration that there is no contact with water is necessary to preserve the integrity of the liner system. In subsection (a)(2), the addition of the chemical description is necessary for soils that are not clean fill.

Section 289.127. Mineral deposits information.

This section currently requires a permit applicant to demonstrate that it owns the recoverable or mineable coals underlying the permit area and adjacent area and to warrant that the applicant will not mine the coal as long as residual waste remains on the site. Subsection (b) has been revised to expand the coverage from coal to all mineable minerals to protect impoundments from potential instability problems associated with mining activities. In addition, new language has been proposed to exempt expansions of captive facilities permitted prior to July 4, 1992, from the mineral deposits requirements in subsection (b). This proposed revision will allow the expansion of captive facilities on adjacent areas rather than locating new disposal sites.

Section 289.128. Notification of proximity to airport.

This proposed rulemaking includes a new section to require that a residual waste disposal impoundment permit applicant notify the Federal Aviation Administration, the Department and the airport if the proposed facility is within 5 miles of an airport runway end. This requirement only applies to facilities that plan to receive putrescible waste. This proposed rulemaking is added to be consistent with the Federal Subtitle D criteria for municipal waste disposal facilities (40 CFR Part 258) and to facilitate greater input on the feasibility of the location of the impoundment.

Section 289.132. Operation plan.

Proposed changes to paragraph (1) require the applicant to include a plan for the inspection and monitoring of incoming waste to help ensure that waste not approved for receipt by the facility is not received and that waste will be rejected or specially addressed if it poses a problem. Paragraphs (3) and (4), which are the requirements to describe the type and size of equipment to be used at the facility and the plan for hiring and training personnel, have been deleted in this proposed rulemaking. Proposed changes to new paragraph (6) clarify the operating hours of the facility. The amendment clarifies that operating hours include time during which construction and operation activities will occur. This requirement will help the operator and the Department to minimize noise complaints.

Section 289.134. Plan for access roads.

Amendments to this section have been proposed to require that access roads be designed and constructed to handle truck traffic adequately. This requirement sets a performance standard by which to gauge the adequacy of proposed access roads.

Section 289.136. Nuisance minimization and control plan.

Several proposed changes have been made to this section. The title of this section has been amended to reflect the need to minimize nuisances during the facility planning stages. Subsection (a) has been modified to require that a plan be submitted that describes how nuisances will be minimized and controlled. By planning to control and minimize all nuisances, the expectation is that conditions that give rise to public nuisances will be abated. The Department's focus will be on ensuring the effectiveness of the operator's plan to minimize and control nuisances. Subsection (b) has been added to identify specific items that must be addressed in the plan. The plan must include the following: routine assessment and control of vector infestations; methods to minimize and control nuisances from odors, dustfall and noise levels off the property boundary from the facility; and for odors, a determination of normal and adverse weather conditions, based on site-specific meteorological data. The plan continues to allow the inclusion of contractual arrangements for the services of nuisance control professionals.

Section 289.137. Daily volume.

The proposed amendments include a new section that requires identification in an application of the proposed average and maximum daily volumes for the facility and a detailed justification for the volumes. These volumes are necessary to evaluate traffic, air quality and other potential harms during the environmental assessment review. These requirements currently exist in the municipal waste landfill regulations.

Section 289.141. Cover plan.

A cross reference to the operating requirements is proposed to be amended to reflect the deletion of an existing section in the operating requirements. Additionally, in paragraph (3), the requirement that an applicant provide copies of contracts for the cover materials that will be used at the landfill is eliminated.

Section 289.152. Water quality monitoring plan.

Several significant proposed changes have been made to this section based on an overhauling of the groundwater monitoring, abatement and remediation standards. In subsection (a)(2), the proposed amendments require operators of new facilities to provide pre-operational data showing existing groundwater quality in a permit application. For facilities that existed on July 4, 1992, background water quality must be presented in a permit application. "Background," as defined in Act 2, is the concentration of a substance determined by appropriate statistical methods that is present at the site, but is not related to the release of substances at that site. Under subsection (b), the proposed amendments delete all references to the mandatory abatement trigger levels. The proposed amendments require an application to contain procedures and techniques for evaluating analytical results to determine if groundwater degradation has occurred at a monitoring point. Subsections (d) and (e) have been deleted because they pertain to the application of "groundwater parameters" for groundwater monitoring, and groundwater parameters are no longer applicable to groundwater abatement and remediation in the residual waste regulations.

Section 289.172. Closure plan.

This section requires that a closure plan describe measures that will be taken toward and after closure. In subsection (a), the proposed amendments delete the reference to a postclosure period and clarify that the plan includes activities that occur toward and after closure. Subsection (b)(3) has been deleted because activities such as capping of cells in stages are considered activities that occur toward closure. Closure occurs only once at a landfill, the date the facility permanently ceases to accept waste. Subsection (b)(4) has been similarly revised to refer to activities that occur toward and after closure. A correlating change has been made to § 288.292(b) (relating to closure). In subsection (b)(4)(vi), additional language has been proposed to specify that the plan include a description of maintenance of access control after closure. This amendment addresses questions concerning maintenance that have been raised in the field.

Operating Requirements

Section 289.201. Basic limitations.

A new subsection (e) has been added that requires all approved mitigation measures identified in the application to be completed before waste may be accepted, unless otherwise authorized in writing by the Department for technical reasons. This proposed requirement bolsters the importance of effective mitigation, which is stressed in the environmental assessment of § 287.127.

Section 289.212. Waste solidification.

Subsection (b) has been proposed to be amended to authorize the Department, in a permit, to waive the minimum bearing capacity and minimum factor of safety requirements for solidification of waste in a residual waste impoundment to account for the intended actual site use after final closure.

Section 289.221. Signs and markers.

In subsection (d), proposed changes eliminate the prescriptive language about the size and content of signs and replace the requirement with a performance standard that the sign can be easily seen and read.

Section 289.223. Access roads.

Proposed changes to this section differentiate between access roads leading to the disposal area and those leading to ancillary structures. Subsection (e) has been changed to remove the minimum cartway width for access roads not leading to a disposal area. Subsection (f) has been changed to remove the requirement that an access road to a treatment facility, impoundment or groundwater monitoring point be negotiable by loaded collection vehicles. Subsection (g), which requires that an access road be constructed on a dry and stable area, has been deleted. The performance standards in this section are sufficient to direct the safe construction of access roads. Subsection (h), which contains the prescriptive requirements that any topsoil be removed prior to construction of an access road and be immediately used as final cover or stored, has been deleted. The impoundment operator may determine the best use for the soil.

Section 289.224. Measurement and inspection of waste.

The title to this section has been amended to include the inspection of waste. In addition, a new subsection (b) has been added that requires an operator of a landfill to inspect and monitor incoming waste for consistency with this article and the permit and to monitor for radioactive isotopes.

Section 289.225. Equipment.

In subsection (b), the requirement that standby equipment must be located on the site or at a place where it can be available within 24 hours has been deleted. This requirement is redundant of the requirement in subsection (a) that the operator maintain on the site equipment necessary for the operation of the facility in accordance with the permit.

Section 289.227. Air resources protection.

Proposed changes to this section clarify the requirements that currently exist in this section. In subsection (a), the changes include the correction of a typographical error ("containment" to "contaminant") and cross referencing the nuisance minimization and control requirements of § 288.218 (relating to nuisance minimization and control). In subsection (a)(3), a requirement to minimize the generation of fugitive dust emissions from the facility has been added. In subsection (b), new language has been added requiring that the operator of a residual waste impoundment comply with the terms and conditions of any air quality plan approval and air quality operating permit issued to the facility.

Section 289.228. Nuisance minimization and control.

Several proposed changes have been made to this section. The title of this section has been amended to reflect the need to minimize nuisances during the operational phase of the facility. The nuisance minimization and control plan, approved under § 289.136, should be implemented to control and minimize all nuisances such that conditions that give rise to public nuisances will be abated. Subsection (b) has been modified to require that an operator minimize and control public nuisances. The Department's focus will be on ensuring that the operator implement its nuisance minimization and control plan effectively. The operator will be responsible for minimizing and controlling nuisances as they arise during operations. A new subsection (c) has been added to specifically address the minimization and control of odors. In addition to implementing the nuisance minimization and control plan, the operator must perform site inspections to evaluate the effectiveness of its waste management practices in

reducing the potential for offsite odor creation. Also, the operator must promptly address any problems or deficiencies discovered in the course of the site inspections.

Section 289.229. Daily volume.

The proposed amendments include a new § 289.229 to require compliance with the daily volumes approved in the permit and to indicate how the daily volumes are to be calculated. The annual computation of the average daily volume received at an impoundment must be included in the operator's annual report. A similar section already exists in the municipal waste regulations.

Section 289.241. Topsoil storage.

This section has been deleted in this proposed rulemaking because the volume of topsoil at these sites is inadequate or, in some cases, nonexistent for use as final cover. The operator is required upon closure to supply the necessary soil. The bond calculations include the price of purchasing acceptable soil, if necessary.

Section 289.242. Cover.

In subsection (a), the proposed amendments allow the use of materials other than soil for intermediate cover, if required. In subsection (b), the prescriptive design standards for the cap have been reduced and performance standards have been added to provide greater flexibility. A new subsection (d) enables an operator to obtain an equivalency review for alternative cap designs. In subsection (e), the final cover placed over the drainage layer will now have to be capable of controlling fires and be consistent with the waste acceptance plan for the impoundment. In subsection (f), the design requirement that the combustible or coal content of the cover may not exceed 12% by weight has been deleted because it is prescriptive and the requirement for controlling fires is now a performance standard.

Section 289.255. Water supply replacement.

In subsection (a), new language has been included to clarify that when an operator adversely affects a water supply by degradation, pollution or other means, the operator must restore the affected supply. The proposed amendments include a new subsection (d) that explains what qualifies as a permanent water supply for purposes of water supply replacement. Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply, or extension of a private water supply. A permanent water supply does not include provision of bottled water or a water tank supplied by a bulk water hauling system. These changes were made to be consistent with the municipal waste regulations.

Section 289.262. Number, location and depth of monitoring points.

Subsection (b)(3) has been proposed to be modified to require that additional wells be located at the compliance points, which are different from the existing monitoring points. Subsection (e) has been proposed to be deleted because it is no longer necessary to require that monitoring and compliance wells be drilled by drillers licensed under the Water Well Drillers License Act (32 P. S. §§ 645.1—645.13). Section 289.152 requires that an applicant demonstrate that the monitoring wells will accurately measure groundwater quality. The details of well construction are included in this demonstration. Without specifying who must drill the wells, the Department has maintained the design and performance standards that must be met.

Section 289.263. Standards for wells and casing of wells.

The title of this section has been modified to include "wells" to reflect accurately the scope of the section. A grammatical change is proposed to subsection (a)(1) to remove an unnecessary comma. Subsecction (a)(3)(iv) has been deleted to eliminate the requirement that slot openings, design and screen diameter allow for effective well development because it is a common practice in the development of wells. In subsection (a)(5) the requirement that well casings be clearly visible has been added. In subsection (a)(7), the prescriptive design requirement about plastic casings has been deleted and replaced with a requirement that plastic casing be designed and constructed in a manner that prevents cross contamination between surface water and groundwater. In subsection (b)(5), the prescriptive design requirement that a well casing enclosing a monitoring well casing protrude at least 1 inch higher above grade than the monitoring well casing has been deleted. The proposed requirement no longer specifies an exact height the protective casing must protrude above the monitoring well casing.

Section 289.266. Groundwater assessment plan.

In subsection (a), the time available to prepare and submit a groundwater assessment plan has been extended from 30 to 60 days. This proposed change was made because field experience has demonstrated that more time is necessary to evaluate the causes of degradation and to prepare a report explaining exceedances at the monitoring points. Also, a fate and transport analysis must be performed to determine the rate and direction of migration of contaminants in the groundwater. Subsection (a)(2) has been deleted because the requirement is outdated. Under subsection (c), new language indicates that if an operator establishes compliance points as part of the assessment, the points shall be constructed in accordance with §§ 288.252 and 288.253 (relating to number, location and depth of monitoring points; and standards for wells and casing of wells). If an operator intends to meet the background standard for remediation, the operator is advised to establish the same points for monitoring and remediation compliance, since compliance with the background standard requires background to be demonstrated in all areas where the contamination occurs. A new subsection (c)(5) has been added to require the identification in the assessment plan of the abatement standard that will be met. By requiring this information in an assessment plan, the operator must plan for the likelihood of implementing abatement where the fate and transport analysis indicates there will be a problem.

Section 289.267. Abatement plan.

In subsection (a)(1), the triggers for requiring abatement have been revised. "Mandatory abatement trigger levels" have been deleted. Abatement is required when one of the following occurs: 1) the groundwater assessment plan shows the presence of groundwater degradation at the monitoring points (within 200 feet of the permitted disposal area) and the fate and transport analysis indicates that an abatement standard will not be met; or 2) monitoring by the Department or the operator shows the presence of an abatement standard exceedance from one or more compliance points.

The proposed amendments include a new subsection (c) which establishes the abatement standards that must be met at a disposal impoundment. The abatement standards and their points of compliance are identified as follows: 1) for constituents for which a Statewide health standard exists, the Statewide health standard for that

constituent with compliance points at and beyond 150 meters of the perimeter of the permitted disposal area or at the property boundary, whichever is closer; 2) the background standard for constituents with compliance points at and beyond 150 meters of the perimeter of the permitted disposal area or at the property boundary, whichever is closer; and 3) for constituents for which no primary MCLs under the Federal and State Safe Drinking Water Acts exist, the risk-based standard for that constituent with compliance points at and beyond 150 meters of the perimeter of the permitted disposal area or at the property boundary, whichever is closer.

The risk-based standard has been developed to be consistent with 40 CFR 258.55(i) (relating to assessment monitoring program). The proposed amendments include several factors that must be considered when using a risk-based standard for abatement. The factors identified are as follows: 1) the risk assessment used to establish the standard must assume that human receptors exist at the property boundary; 2) the level must be derived in a manner consistent with Department guidelines for assessing the health risks of environmental pollution; 3) the level must be based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards or other scientifically valid studies approved by the Department; and for carcinogens, the level must represent a concentration associated with an excess lifetime cancer risk of 1 × 10-5 at the property boundary. The risk-based standard may not be used if a State or Federal MCL exists for the contaminant in question.

In new subsection (d), the Department may approve a compliance point beyond 150 meters on land owned by the owner of the disposal area for measuring compliance with secondary contaminants when using either the Statewide health or risk-based standard.

Section 289.281. Mineral resources.

Proposed changes to subsection (a) delete the prescriptive 25 foot coal seam and coal outcrop isolation distance, replacing it with a requirement that the operator isolate a coal seam, coal outcrop and coal refuse in a manner that prevents combustion of the waste and damage to the liner system.

Section 289.282. Gas control and monitoring.

Proposed changes to subsection (e)(3) delete the standard for gas monitoring in areas adjacent to the permit area. The regulation continues to require the operator to control decomposition gases onsite to prevent danger to occupants of adjacent properties. The onsite monitoring serves as an early warning indicator of potential offsite migration.

Section 289.291. Hazard prevention.

The emergency procedures in this section have been modified to delete information already required in the PPC Plan.

Section 289.292. Emergency equipment.

Subsection (a)(3) has been proposed amended to require that an adequate water supply be available for firefighting equipment.

Section 289.301. Daily operational records.

In subsection (a), the daily report requirements in this section have been proposed to be revised to allow an operator of a captive residual waste facility to maintain a monthly log instead of a daily record. This requirement is consistent with a change that was made to § 288.281 in the recent "Recordkeeping and Reporting Requirements" regulatory package. To facilitate this change, the word "daily" is deleted from subsection (b) and the word "monthly" is added in subsection (d). To achieve further consistency with § 288.281, a requirement in subsection (b)(7)(iii), that noncaptive facilities keep a record of the analysis of the quality and quantity of leachate flowing from the impoundment into the leachate storage and treatment systems, is added.

Section 289.302. Quarterly operation report.

This section has been deleted in this proposed rulemaking just as the requirement was deleted for residual waste landfills in the "Recordkeeping and Reporting Requirements" regulatory package. All of the requirements of the quarterly report are included in the daily (or monthly) operational record.

Section 289.303. Annual operation report.

In subsection (b)(i), the annual operation reporting requirements have been modified to require noncaptive residual waste impoundments to describe the average daily volume received at the facility since identifying average daily volume is now a requirement for residual waste disposal impoundments. In addition, a proposed change in subsection (c) increases the fee that accompanies the annual operation report from $2,500 to $4,600 to cover increases in administrative costs.

Section 289.312. Closure.

In subsection (b), the reference to "partial closure" has been deleted and the language has been conformed to be consistent with the proposed changes made to § 288.182 (relating to closure plan).

A new subsection (c) has been added to the proposed rulemaking that gives a person the option to continue to implement an approved abatement plan or modify a closure plan to address groundwater degradation that exists at closure or occurs after closure. If a person chooses to submit a an application for a permit modification, the application must identify the remediation standards that will be met in accordance with the final closure certification requirements in § 287.342. The Department will accept the selection of remediation standards if technical information and supporting documentation of the remediation activities demonstrate that the standards will be met and maintained and if documentation of cooperation or an agreement is in place with a third party where a remedy relies on access to or use of a third party's property for remediation or monitoring.

Additional Application Requirements for Class I Residual Waste Disposal Impoundments

Section 289.412. Liner system and leachate control plan.

In subsection (c), the requirement that the leachate demonstration be based on the EPA Method 9090 compatibility test has been replaced with language that allows the demonstration to be based on EPA or ASTM guidelines approved by the Department. This proposed change will allow applicants to keep up with changing standards and technology. Also, in subsection (d)(19), a requirement has been added to identify in the permit application the percent of recycled material in the proposed primary and secondary liners.

Additional Operating Requirements for Class I Residual Waste Disposal Impoundments

Section 289.422. Areas where Class I residual waste disposal impoundments are prohibited.

Several changes have been proposed in this section. First, subsection (a)(4) currently requires that an operator own the underlying recoverable or mineable coal in order to obtain a Class I residual waste disposal impoundment permit. The proposed revision would extend the requirement to ownership of all recoverable or mineable minerals. As explained in the discussion of § 289.127, the expanded coverage from coal to all mineable minerals will better protect disposal impoundments from potential instability problems associated with mining activities. The proposed revision provides an exemption from this limitation for captive facilities permitted prior to July 4, 1992, to allow for expansions of these facilities on adjacent areas.

Secondly, subsection (a)(7), which refers to distance between occupied dwellings and disposal impoundments, is bifurcated for clarity. Subparagraph (i) refers to disposal impoundments permitted prior to the date of publication of the final-form regulations in the *Pennsylvania Bulletin*, to expansions of residual waste disposal impoundments permitted prior to the date of publication of the final-form regulations in the *Pennsylvania Bulletin*, and to captive residual waste disposal impoundments. In that subparagraph, the reference to "facilities permitted prior to July 4, 1992" is deleted as unnecessary since subsection (a) exempts areas permitted prior to July 4, 1992, in the lead-in language. Subparagraph (ii) refers to residual waste disposal impoundments permitted after the date of publication, except for captive residual waste disposal impoundments. The proposed amendments extend the isolation distance between disposal impoundments and occupied dwellings to 300 yards, from 300 feet. This additional distance will help to reduce complaints from nearby dwellings concerning noise, odors and nuisances. The requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste treatment facilities. Section 511(c) of Act 101 authorizes the Department to establish site limitations by regulation that are in addition to or more stringent than the site limitation between a facility and parks, playgrounds or schools. The same Legislative concerns that apply to setback distances from schools would apply to occupied dwellings. The owner of the dwelling may provide a written waiver consenting to the facility being closer than 300 yards.

In subsection (a)(10), the proposed amendments delete the prohibition against constructing a facility within 25 feet of a coal seam or coal outcrop or of coal refuse. This standard is not necessary because adequate protection from fires can be addressed in the design of the facility. To address fire protection in the facility design, the Department proposes in § 289.281 to require a disposal impoundment operator to isolate coal seams, coal outcrops and coal refuse from waste deposits in a manner that prevents combustion of the waste.

In subsection (a)(11), the proposed regulations amend the isolation distances from airports to reflect the restrictions in the Federal Subtitle D (40 CFR Part 258) regulations. Based on the Department's experience with putrescible waste in landfills in the municipal waste program, this proposed amendments establish a site limitation that must be met unless the applicant can demonstrate that the disposal impoundment will be designed and operated so that it will not pose a bird hazard to aircraft. Definitions for "airport" and "bird hazard" are included in this section that contain language from the Subtitle D regulations.

Subsection (a)(12) has been added to provide for an isolation distance between disposal impoundments and schools, parks and playgrounds that is 300 yards. This requirement will apply to disposal impoundments permitted on or after the date of publication of the final-form regulations in the *Pennsylvania Bulletin*. The property owner of the park, playground or school may provide a written waiver consenting to the facility being closer than 300 yards. Noncaptive impoundments permitted prior to the date of publication of these amendments as final-form regulations in the *Pennsylvania Bulletin* are not intended to be affected by the more stringent isolation distances proposed in this section when reissuance or renewal of the permit, or expansion of the permit area is sought. This requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste treatment facilities. Section 511(c) of Act 101 authorizes the Department to establish site limitations by regulation that are in addition to or more stringent than the site limitation between these facilities and parks, playgrounds or schools. The same Legislative concerns that apply to setback distances from municipal waste landfills for parks, playgrounds and schools would apply to residual waste disposal impoundments.

Section 289.423. Minimum requirements for acceptable waste.

A new subsection (a)(5) has been proposed to be added that prohibits a person from disposing of residual waste at a Class I residual waste disposal impoundment unless the physical characteristics of the waste will not cause or contribute to structural instability or other operating problems at the site. This revision has been proposed to ensure the integrity of the liner system.

Section 289.432. General limitations.

In subsection (a), a change has been proposed to the requirement that 4 feet exist between the top of the subbase of the liner system and the seasonal high water table. The revision requires that the bottom of the subbase cannot be in contact with the seasonal high water table or perched water table. The prescriptive buffer between the liner system and the seasonal high water table has been replaced with a performance standard to prevent contact between the two. In subsection (a)(2), the drainage systems may now be used to prevent contact between the bottom of the subbase and the water tables rather than to maintain the 4-foot isolation distance. This change is consistent with the other changes in subsection (a). In subsection (b), the 8-foot isolation distance from the top of the subbase and the regional groundwater table for unconfined aquifers has been changed to the distance from the bottom of the subbase. In subsection (c), the 8-foot isolation distance for confined aquifers from the top of the subbase to the top of the confining layer or the shallowest level below the bottom of the subbase where groundwater occurs has been changed to the distance from the bottom of the subbase. These changes from the top to the bottom of the subbase have been proposed to clarify questions raised during construction of disposal impoundments.

Section 289.433. Subbase.

The design requirement in subsection (b) has been proposed to be deleted. The minimum bearing capacity of

4,500 pounds per square foot plus the total applied load in pounds per square foot is no longer necessary because this standard does not serve as an adequate stability standard for all facility designs.

Section 289.434. Secondary liner.

In subsection (b), the words "at the minimum" were proposed to be added to allow for the use of liners that meet or exceed the design requirements in Appendix A, Table I without an equivalency demonstration.

Section 289.435. Leachate detection zone.

In subsection (b)(5)(ii), the design requirement that the distance between pipes in the piping system for the leachate detection zone not exceed 100 feet on center has been deleted. This change has been proposed because it has not proven necessary for an effective system. In subsection (f), the language concerning monitoring of the leachate detection zone has been revised to replace "exceedance of mandatory abatement trigger levels" with "groundwater degradation at a monitoring well." This change has been proposed because mandatory abatement trigger levels are proposed to be deleted in this rulemaking. Additionally, in subsection (f)(1), the proposed amendments require that an operator not only submit to the Department a remedial plan for controlling the source of leachate in the leachate detection zone, but also that the operator correct a malfunction or defect in the liner system where groundwater degradation has been detected.

Section 289.436. Primary liner.

In subsection (b), the words "at the minimum" were proposed to be added to allow for the use of liners that meet or exceed the design requirements in Appendix A, Table I without an equivalency demonstration.

Section 289.454. Leachate recirculation.

Subsection (b) has been added to allow the Department to authorize an alternative leachate recirculation method for a facility. This proposed revision will allow, for example, an alternative design where intermediate cover may not be necessary or a piping system is not used.

Section 289.455. Leachate collection and storage.

Proposed changes in subsection (b) allow tank or impoundment storage volumes at captive facilities to be performance based as opposed to always requiring the volume to be based on the expected 30-day flow. Most residual waste disposal impoundments are captive facilities and have existing storage and treatment facilities capable of handling the expected leachate flow without increasing storage capacity. A proposed revision to subsection (d) indicates that the storage capacity of impoundments and tanks will be increased if necessary. A new subsection (g) has been added to require secondary containment for pipes that are located outside the lined areas of the facility. This requirement has been added to reduce the likelihood of leaks or releases from the pipes.

Section 289.456. Leachate analysis and sludge handling.

Proposed changes in subsection (a)(2) allow the Department to modify the frequency or chemical constituents of leachate testing if the facility operator demonstrates after four quarters of testing that this will not compromise groundwater protection.

Additional Application Requirements for Class II Residual Waste Disposal Impoundments

Section 289.512. Liner system and leachate control plan.

In subsection (c), the requirement that the leachate demonstration be based on the EPA Method 9090 compatibility test has been replaced with language that allows the demonstration to be based on EPA or ASTM guidelines approved by the Department. This proposed change will allow applicants to keep up with changing standards and technology. Also, in subsection (d)(19), a requirement has been added to identify in the permit application the percent of recycled material in the proposed liner.

Additional Operating Requirements for Class II Residual Waste Disposal Impoundments

Section 289.522. Areas where Class II residual waste disposal impoundments are prohibited.

Several changes have been proposed in this section. First, subsection (a)(4) currently requires that an operator own the underlying recoverable or mineable coal to obtain a Class II residual waste disposal impoundment permit. The proposed revision would extend the requirement to ownership of all recoverable or mineable minerals. As explained in the discussion of § 289.127, the expanded coverage from coal to all mineable minerals will better protect disposal impoundments from potential instability problems associated with mining activities. The proposed revision provides an exemption from this limitation for captive facilities permitted prior to July 4, 1992, to allow for expansions of these facilities on adjacent areas.

Secondly, subsection (a)(7), which refers to distance between occupied dwellings and disposal impoundments, is bifurcated for clarity. Subparagraph (i) refers to disposal impoundments permitted prior to the date of publication of the final-form regulations in the *Pennsylvania Bulletin*, to expansions of residual waste disposal impoundments permitted prior to the date of the final-form regulations in the *Pennsylvania Bulletin*, and to captive residual waste disposal impoundments. In that subparagraph, the reference to "facilities permitted prior to July 4, 1992" is deleted as unnecessary since subsection (a) exempts areas permitted prior to July 4, 1992, in the lead-in language. Subparagraph (ii) refers to residual waste disposal impoundments permitted after the date of publication, except for captive residual waste disposal impoundments. The proposed amendment extends the isolation distance between disposal impoundments and occupied dwellings to 300 yards, from 300 feet. This additional distance will help to reduce complaints from nearby dwellings concerning noise, odors and nuisances. The requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste treatment facilities. Section 511(c) of Act 101 authorizes the Department to establish site limitations by regulation that are in addition to or more stringent than the site limitation between a facility and parks, playgrounds or schools. The same Legislative concerns that apply to setback distances from schools would apply to occupied dwellings. The owner of the dwelling may provide a written waiver consenting to the facility being closer than 300 yards.

In subsection (a)(10), the proposed amendments delete the prohibition against constructing a facility within 25 feet of a coal seam or coal outcrop or of coal refuse. This standard is not necessary because adequate protection from fires can be addressed in the design of the facility.

In subsection (a)(11), the proposed amendments amend the isolation distances from airports to reflect the restrictions in the Federal Subtitle D (40 CFR Part 258) regulations. Based on the Department's experience with putrescible waste in landfills in the municipal waste program, this proposed rulemaking establishes a site limitation that must be met unless the applicant can demonstrate that the disposal impoundment will be designed and operated so that it will not pose a bird hazard to aircraft. Definitions for "airport" and "bird hazard" are included in this section that contain language from the Subtitle D regulations.

Subsection (a)(12) has been added to be consistent with the municipal waste regulations. It provides for an isolation distance between disposal impoundments and schools, parks and playgrounds that is 300 yards. This requirement will apply to disposal impoundments permitted on or after the date of publication of the final-form regulations in the *Pennsylvania Bulletin*. The property owner of the park, playground or school may provide a written waiver consenting to the facility being closer than 300 yards. Noncaptive impoundments permitted prior to the date of publication of these amendments as final-form in the *Pennsylvania Bulletin* are not intended to be affected by the more stringent isolation distances proposed in this section when reissuance or renewal of the permit, or expansion of the permit area is sought. This requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste treatment facilities. Section 511(c) of Act 101 authorizes the Department to establish site limitations by regulation that are in addition to or more stringent than the site limitation between these facilities and parks, playgrounds or schools. The same Legislative concerns that apply to setback distances from municipal waste landfills for parks, playgrounds and schools would apply to residual waste disposal impoundments.

In addition, misnumbering corrections have been made in subsection (b).

Section 289.523. Minimum requirements for acceptable waste.

The phrase "groundwater parameter" has been proposed to be changed to "waste classification standard" to be consistent with that term's definition in § 287.1.

A new subsection (a)(11) has been added that prohibits a person from disposing of residual waste at a Class II residual waste landfill unless the physical characteristics of the waste will not cause or contribute to structural instability or other operating problems at the site. This revision has been proposed to ensure the integrity of the liner system.

Section 289.532. General limitations.

In subsection (a), a change has been proposed to the requirement that 4 feet exist between the top of the subbase of the liner system and the seasonal high water table. The revision requires that the bottom of the subbase cannot be in contact with the seasonal high water table or perched water table. The prescriptive buffer between the liner system and the seasonal high water table has been replaced with a performance standard to prevent contact between the two. In subsection (a)(2), the drainage systems may now be used to prevent contact between the bottom of the subbase and the water tables rather than to maintain the 4-foot isolation distance. This change is consistent with the other changes in subsection (a). In subsection (b), the 8-foot isolation distance from the top of the subbase and the regional groundwater table for unconfined aquifers has been changed to the distance from the bottom of the subbase. In subsection (c), the 8-foot isolation distance for confined aquifers from the top of the subbase to the top of the confining layer or the shallowest level below the bottom of the subbase where groundwater occurs has been changed to the distance from the bottom of the subbase. These changes from the top to the bottom of the subbase have been proposed to clarify questions raised during construction of disposal impoundments.

Section 289.534. Leachate detection zone.

In subsection (b)(4)(ii), the design requirement that the distance between pipes in the piping system for the leachate detection zone not exceed 100 feet on center has been deleted. This change has been proposed because it has not proven necessary for an effective system. In subsection (f), the language concerning monitoring of the leachate detection zone has been revised to replace "exceedance of mandatory abatement trigger levels" with "groundwater degradation." This change has been proposed because mandatory abatement trigger levels are proposed to be deleted in this rulemaking. Additionally, in subsection (f)(1), the proposed amendments require that an operator not only submit to the Department a remedial plan for controlling the source of leachate in the leachate detection zone, but also that the operator correct a malfunction or defect in the liner system where groundwater degradation has been detected.

Section 289.535. Liner.

In subsection (b), the words "at the minimum" were proposed to be added to allow for the use of liners that meet or exceed the design requirements in Appendix A, Table I without an equivalency demonstration.

Section 289.554. Leachate recirculation.

Subsection (b) has been added to allow the Department to authorize an alternative leachate recirculation method for a facility. This proposed revision will allow, for example, an alternative design where intermediate cover may not be necessary or a piping system is not used.

Section 289.555. Leachate collection and storage.

Proposed changes in subsection (b) allow tank or impoundment storage volumes at captive facilities to be performance based as opposed to always requiring the volume to be based on the expected 30-day flow. Most residual waste disposal impoundments are captive facilities and have existing storage and treatment facilities capable of handling the expected leachate flow without increasing storage capacity. A proposed revision to subsection (d) indicates that the storage capacity of impoundments and tanks will be increased if necessary. A new subsection (g) has been added to require secondary containment for pipes that are located outside the lined areas of the facility. This requirement has been added to reduce the likelihood of leaks or releases from the pipes.

Section 289.556. Leachate analysis and sludge handling.

Proposed changes in subsection (a)(2) allow the Department to modify the frequency or chemical constituents of leachate testing if the facility operator demonstrates after four quarters of testing that this will not compromise groundwater protection.

Appendix A.

The proposed amendments modify Tables I and II. The proposed changes incorporate technological advances that have been made for liners and caps.

Chapter 291. Land Application of Residual Waste

Application Requirements

Section 291.101. General.

In subsection (a)(4) of the proposed amendments, the reference to surface land disposal has been deleted since, under these proposed amendments, that activity will no longer be authorized under the residual waste regulations.

Section 291.102. Operating plan.

In paragraph (1), the reference to surface land disposal has been proposed to be deleted since that activity will no longer be authorized under the residual waste regulations.

Section 291.103. Maps and related information.

In subsection (a)(5) of the proposed amendments, the word "supplies" has been deleted and replaced with the word "sources" because not all water supplies are readily available by mapping or by field survey. Subsection (a)(8) has been deleted because it applies to surface land disposal, an activity that will no longer be authorized by these regulations.

Operating Requirements

Section 291.201. General provisions.

In subsection (b), the proposed amendments delete references to surface land disposal. In addition, a new requirement, paragraph (4), has been proposed to require residual waste operators that manage residual waste that contains human waste and exceeds the pathogen and vector attraction reduction requirements in § 271.911(b) to meet the operating requirements of Chapter 291 and Chapter 271, Subchapter J (relating to beneficial use of sewage sludge by land application).

The proposed amendments include two new subsections, (d) and (e), that prohibit residual waste from being applied to land if it is unlikely to adversely affect a Federal or Commonwealth threatened or endangered species, or its designated critical habitat, or from being applied to a site that is flooded, frozen or snow-covered, except as expressly provided in a permit. The latter requirement is intended to prevent water pollution problems that result from runoff of waste into surface water.

Section 291.202. Areas where the land application of residual waste is prohibited.

Several proposed changes have been made to this section. First, in subsection (a)(2), the buffer between a land application area and a water source has been modified to allow a buffer smaller than 300 feet if the current owner of the water source provides a written waiver consenting to the shorter distance. Also, the buffer no longer applies to water sources that come into existence after the dates upon which adjacent landowner notification is given under § 287.151(b). These changes were made to prevent disruption to existing, ongoing operations.

Subsection (a)(3), relating to a buffer between a land application area and a surface water source, has been proposed to be deleted because the required conservation plans and other site design requirements address the potential to contaminate surface water. The regulations continue to maintain the buffer distance of 300 feet from all water sources. Subsection (a)(4), relating to a buffer between a land application area and a bedrock outcrop, has been deleted because areas where bedrock outcrops occur are commonly farmed and based on the loading rates of residual waste in these areas there is limited potential for groundwater contamination. Subsection (a)(5), relating to a buffer between a land application area and a property line, has been deleted because this isolation distance has proven to be disruptive to farming activities. Renumbered subsection (a)(3), relating to sinkholes, has been modified to delete the buffer between a land application area and an area draining into a sinkhole because conservation plans prevent direct surface runoff and the isolation distance is disruptive to farming activities. Subsection (a)(7), relating to a buffer between a land application area and an undrained depression, has been deleted because it is difficult to identify these areas by field surveys and because this limitation has proven unnecessary since other requirements adequately protect groundwater and water sources. Subsection (a)(10), relating to a buffer between a surface land disposal activity and a 100-year floodplain, has been deleted because the proposed amendments will no longer authorize surface land disposal activities.

Section 291.203. Limitations on land application of residual waste.

In subsection (a), a proposed change has been made to modify the land application limitation relating to the distance between the regional groundwater table and the surface from 4 feet to 3.3 feet. This change has been made to be consistent with the sewage sludge land application requirements and is based on EPA risk assessment criteria for sewage sludge. The sewage sludge modeling is appropriate for the application of residual waste. In subsection (d), the limitation on growing root vegetables or vegetables which are eaten raw where residual waste is land applied has been changed to eliminate the 2-year time period, and in paragraph (2) the limitation on growing tobacco where residual waste is land applied has been eliminated. These proposed changes were made because it is difficult to project what will be grown on a field, based on farm economics. Heavy metals that may be available for plant uptake are controlled by the loading rates approved for a site. Subsection (g), relating to areas where residual waste is land applied and livestock may graze, has been modified to delete the prescriptive time period limitation of 2 months and replace it with a performance standard based on visibility of the waste.

Section 291.205. Erosion control.

The reference in subsection (c) to surface land disposal has been deleted because the proposed amendments will no longer authorize surface land disposal activities.

Section 291.207. Water supply replacement.

In subsection (a), new language has been included to clarify that when an operator adversely affects a water supply by degradation, pollution or other means, the operator must restore the affected supply. The proposed amendments include a new subsection (d) that explains what qualifies as a permanent water supply for purposes of water supply replacement. Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply, or extension of a private water supply. A permanent water supply does not include provision of bottled water or a water tank supplied by a bulk water hauling system. These proposed changes have been made to be consistent with the municipal waste regulations.

Section 291.209. Permit area markers.

This section has been deleted in the proposed amendments because the permit area markers have caused problems in the operation of farm equipment.

Section 291.210. Nuisance control.

The performance standard in subsection (a) of the proposed amendments has been changed from requiring that vectors not be caused or attracted to requiring that vectors be controlled and minimized. In subsection (b), the performance standard requiring the prevention and elimination of conditions that are harmful or that create nuisances has been changed to a performance standard requiring the control and minimization of the conditions. The level of protection the public will receive is the same under the existing and the proposed requirements. These proposed amendments more accurately reflect the standard practice for nuisance control.

Section 291.221. Daily operational records.

A new requirement, subsection (b)(9), has been added to the daily operation record that requires the reporting of waste handling problems or emergency disposal facilities. This change was made because the requirement applies to all residual waste facilities and was inadvertently omitted from the recordkeeping requirements of this chapter.

Section 291.222. Annual operation report.

All references to surface land disposal have been deleted in subsection (b). In subsection (d), the proposed amendments include increased annual permit administration fees to reflect increases in administrative costs.

Additional Application Requirements for Agricultural Utilization

Section 291.301. Additional application requirements.

Paragraph (4), relating to a demonstration that best agricultural management practices are environmentally protective when the seasonal high water table is less than 20 inches, has been deleted in this proposed rulemaking because existing studies and field practices have demonstrated that residual waste can be safely land applied to soils with less than 20 inches to the seasonal high water table.

Additional Operating Requirements for Agricultural Utilization

Section 291.311. General requirements.

The references in subsection (a) to surface land disposal have been deleted because the proposed amendments will no longer authorize surface land disposal activities.

Section 291.312. Site characteristics.

Several changes have been proposed for this section. Paragraph (2), a requirement for a site limitation of a minimum depth of 20 inches of soil from surface to bedrock, has been deleted because farming practices will dictate the necessary soil depths and the loading rates for land application take attenuation into consideration. In the newly renumbered paragraph (2), the requirement that a site have a minimum depth from surface to seasonal high water table of 20 inches has been modified to 11 inches and the use of a tile drain system to establish a minimum depth has been eliminated. These proposed changes have been made to be consistent with the sewage sludge land application regulations. Research has demonstrated that residual waste can be safely land applied to soils with 11 inches to the seasonal high water table. The maximum slope requirements for agricultural utilization, in paragraph (3), have been modified across the board and raised from 15% to 25% unless otherwise approved in writing by the Department. This change was made because the higher slopes are commonly used in farming practices and a conservation plan will minimize erosion of waste applied to the site. The existing regulations only allow land application on soil that has less than 6.5 pH if the pH will be 6.5 or greater within 6 months after the first application of residual waste. The proposed amendments delete the 6-month time period for meeting a pH of 6.5 or greater to allow for greater flexibility based on the waste characteristics. Newly renumbered paragraph (5) has been modified to delete the requirement that soil pH be maintained at 6.5 or greater for 2 additional years following the last land application of residual waste to the site because the future use of the land is unpredictable and the maintenance of the pH is unnecessary regardless of use.

Section 291.314. Weather.

This section has been deleted in the proposed amendments because weather conditions are now addressed in § 291.201(e).

Section 291.315. Water quality monitoring.

The requirements of this section have been changed in this proposed rulemaking to indicate that groundwater monitoring is only required if determined necessary by the Department, based on the waste and site characteristics. Groundwater monitoring that is determined to be necessary no longer must meet the requirements of §§ 291.521—291.528 (relating to water quality monitoring). This change was made to allow for flexibility in establishing a water quality monitoring system. A standard has been added that the monitoring accurately characterize background groundwater quality at the facility to properly assess whether groundwater degradation is occurring.

Section 291.316. Soil-pore water monitoring.

The requirements of this section have been changed in this proposed rulemaking to indicate that soil-pore water monitoring is only required if determined necessary by the Department, based on the waste and site characteristics. Soil-pore water monitoring that is determined to be necessary no longer must meet the requirements of § 291.515 (relating to soil-pore water monitoring). This change was made to allow for flexibility in establishing a soil-pore water monitoring system. A standard has been added that the monitoring accurately characterize soil-pore water at the facility in order to properly assess subsurface water quality.

Additional Operating Requirements for Land Reclamation

Section 291.412. Site characteristics.

The maximum slope requirement for land reclamation, in paragraph (1), has been raised from 20% to 35% unless otherwise approved in writing by the Department. This change was made to allow for greater flexibility in permitting the application of residual waste for reclamation activities. Paragraph (3) has been modified to delete the requirement that soil pH be maintained at 6.5 or greater for 2 additional years following the last land application of residual waste to the site because the future use of the land is unpredictable and the maintenance of the pH is unnecessary regardless of use.

Section 291.414. Weather.

In subsection (a), the proposed amendments delete the reference to times when the ground is saturated, snow

covered, frozen and during periods of rain as times when an operator may not operate because this limitation is now covered in § 291.201.

Section 291.416. Water quality monitoring.

The requirements of this section have been changed in this proposed rulemaking to indicate that groundwater monitoring is only required if determined necessary by the Department, based on the waste and site characteristics. Groundwater monitoring that is determined to be necessary no longer must meet the requirements of §§ 291.521—291.528. This change was made to allow for flexibility in establishing a monitoring system. A standard has been added that the monitoring accurately characterize background groundwater quality at the facility in order to properly assess whether groundwater degradation is occurring.

Section 291.417. Soil-pore water monitoring.

The requirements of this section have been changed in this proposed rulemaking to indicate that soil-pore water monitoring is only required if determined necessary by the Department, based on the waste and site characteristics. Soil-pore water monitoring that is determined to be necessary no longer must meet the requirements of § 291.515 (relating to soil-pore water monitoring). This change was made to allow for flexibility in establishing a monitoring system. A standard has been added that the monitoring accurately characterize soil-pore water at the facility to properly assess the quality of subsurface water.

Additional Requirements for Surface Land Disposal

Sections 291.501—291.528, which relate to requirements for surface land disposal, have been deleted in this proposed rulemaking. The activity of surface land disposal will no longer be authorized under the residual waste regulations because this management practice is technologically obsolete.

Chapter 293.Transfer Facilities for Residual Waste

Application Requirements

Section 293.1. Scope.

The proposed amendments include a new subsection (b) that allows the Department to waive or modify a requirement of this chapter for permitted transfer facilities at which no actual loading, unloading or transferring of residual waste occurs, if the absence of the loading, unloading and transferring activity renders the requirement unnecessary.

Section 293.103. Maps and related information.

In subsection (a)(4) of the proposed amendments, the word "supplies" has been deleted and replaced with the word "sources" because not all water supplies are readily available by mapping or by field survey. Additionally, the requirement for the identification of the location of wells by the applicant has been changed to consideration of a 1/4-mile radius instead of 1/2-mile radius because this requirement has been proven unnecessary based on the performance of existing permitted transfer facilities in the residual waste program to date. Deletion of subsection (b), the requirement for a map or aerial photograph of the soils for the proposed permit area and adjacent area showing the site boundaries and soil types, has been proposed because the information has not proven useful for purposes of making a permit decision.

Section 293.104. Plan for access roads.

Amendments to this section have been proposed to require that access roads be designed and constructed to handle truck traffic adequately. This requirement sets a performance standard by which to gauge the adequacy of proposed access roads.

Section 293.106. Soil and groundwater monitoring plan.

In subsection (a), the words "adverse effects on" have been proposed to be changed to groundwater "degradation" to provide clarity to the monitoring program. "Groundwater degradation" is a defined term in § 287.1.

Section 293.109. Contingency plan.

A minor change to this section proposes to add the word "plans" to correct a clerical error.

Operating Requirements

Section 293.201. Basic limitations.

Subsection (f) has been added to the proposed amendments to allow for implementation of the mitigation measures determined by the environmental assessment process during the appropriate time of site development. The subsection requires that all approved mitigation measures identified in the permit application be completed before a facility may accept waste, unless a later date is authorized in writing by the Department for technical reasons.

Section 293.202. Areas where transfer facilities are prohibited.

The lead-in language in subsection (a) has been modified to correct a clerical error. In addition, several proposed changes have been made to subsection (a). Proposed amendments to paragraph (3), relating to buffer distances between a transfer facility and wetlands that are not exceptional value wetlands, have been proposed to allow for smaller buffers if the storage and processing takes place in an enclosed facility.

Proposed amendments to paragraph (5) allow for a smaller buffer between a transfer facility and a perennial stream if the storage and processing takes place in an enclosed facility and no adverse impacts to the perennial stream will result. Also, new language to this paragraph allows a transfer facility to be next to a perennial stream if the facility transfers waste to barges at the transfer facility location.

The buffer requirement between a transfer facility and a property line, paragraph (6), has been proposed to be amended to allow the operation of a transfer facility at a distance closer than 50 feet if either the storage and processing take place in an enclosed facility or if the owner of the adjacent property provides written consent for a waiver of the buffer.

A new buffer requirement has been added to the proposed rulemaking. Under paragraph (7), a transfer facility may not be located within 300 yards of a park, school or playground. The property owner of the park, playground or school may provide a written waiver consenting to the facility being closer than 300 yards. Transfer facilities permitted prior to the date of publication of these amendments as final-form in the *Pennsylvania Bulletin* are not intended to be affected by the more stringent isolation distances proposed in this section when reissuance or renewal of the permit, or expansion of the permit area is sought. This requirement is drawn from the isolation distance in Act 101 of 300 yards from a school, park or playground for municipal waste landfills, resource recovery facilities and commercial residual waste facilities.

Section 293.211. Signs.

In subsection (a), proposed changes eliminate the prescriptive language about the size and content of signs and replace the requirement with a performance standard that the sign can be easily seen and read.

Section 293.213. Access roads.

Subsection (c) has been amended to require that an access road's drainage system comply with the erosion control requirements in Chapter 102. In subsection (d), language has been added that requires Departmental approval in a permit for the use of materials equivalent to asphalt, gravel, or cinders in paving access roads. This requirement was added to allow the Department to review materials proposed for use prior to their application to the site. A new performance standard, subsection (h), has been added to require that an access road be maintained to control dust and to prevent or control the tracking of mud on and offsite.

Section 293.215. Operations and equipment.

In subsection (c), the requirement that standby equipment must be located on the site or at the place where it can be available within 24 hours has been deleted. This requirement is redundant of the requirement in subsection (b) that the operator maintain on the site equipment necessary for the operation of the facility in accordance with the permit. In subsection (e), a separate frequency for cleaning equipment used to handle putrescible waste has been eliminated to allow for flexibility in the cleaning frequency based on the specific waste type. The proposed amendments include a new subsection (f) that requires an operator of a transfer facility to inspect and monitor incoming waste for consistency with this article and the permit and to monitor for radioactive isotopes. This new requirement was added to address problems that have occurred at landfills that receive problem wastes from transfer facilities.

Section 293.216. Unloading area.

A proposed change to subsection (b) allows leachate to be collected in holding tanks prior to its transport to the sewage treatment plant. This requirement was added to provide for more flexibility in managing the leachate in areas where a facility cannot be feasibly connected to a sanitary sewer system.

Section 293.217. Cleaning and maintenance.

A proposed change to subsection (b) allows for an extension of time for storage of putrescible waste up to 72 hours over a weekend or 3-day weekend if the transfer facility permit so provides. This change was made to address where the storage of waste through a transfer operation can be properly stored over 3-day weekends.

Section 293.218. Air resources protection.

An amendment to subsection (a) includes a new cross reference to § 293.219 (relating to nuisance control).

Section 293.219. Nuisance control.

The performance standard in subsection (a) of the proposed amendments has been changed from requiring that vectors be prevented and eliminated to requiring that vectors be controlled and minimized. In subsection (b), the performance standard requiring the prevention and elimination of conditions that are harmful or that create nuisances has been changed to a performance standard requiring the control and minimization of the conditions. The level of protection the public will receive is the same under the existing and the proposed requirements. These proposed amendments more accurately reflect the standard practice for nuisance control.

Section 293.221. Litter.

A clarification to subsection (c) of the proposed amendments requires that "blown off and intercepted" litter be collected from fences, roadways, tree line barriers and other barriers.

Section 293.231. General requirements.

In subsection (b), the word "pollution" has been proposed to be added for clarification.

Section 293.232. Soil erosion and sedimentation control.

A cross reference to Chapter 102 has been proposed to be added to paragraph (1) to indicate that compliance with that chapter is required.

Section 293.234. Water supply replacement.

In subsection (a), new language has been included to clarify that when an operator adversely affects a water supply by degradation, pollution or other means, the operator must restore the affected supply. The proposed amendments include a new subsection (d) that explains what qualifies as a permanent water supply for purposes of water supply replacement. Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply, or extension of a private water supply. A permanent water supply does not include provision of bottled water or a water tank supplied by a bulk water hauling system. These modifications were made to be consistent with the municipal waste regulations.

Section 293.241. Hazard prevention.

The emergency procedures in this section have been modified to delete information already required in a PPC Plan.

Section 293.251. Daily operational records.

The proposed amendments include a new requirement, subsection (a)(10), which requires that a record of rejected waste loads and the reasons for rejecting the loads be included in the daily operational records. This requirement has been added to help identify and track problem wastes that are rejected at transfer facilities.

Section 293.262. Cessation of operations.

A clerical error has been corrected in subsection (b) that clarifies Departmental approval is required to discontinue soil monitoring upon cessation of processing operations.

Chapter 295. Composting Facilities for Residual Waste

Application Requirements

Section 295.112. Maps and related information.

In subsection (a), a clarification has been made that the topographic map should contain the proposed permit area and adjacent area. Also, in paragraph (1), a requirement was added that the boundaries of the land within the proposed permit area be identified on the maps. In subsection (a)(4), the word "sources" has been substituted for "supplies" because not all water supplies are readily available by mapping or by field survey. In subsection (a)(14), the proposed amendments require loading and unloading areas to be identified on maps. Deletion of subsection (b), the requirement for a map or aerial photograph of the soils for the proposed permit area and adjacent area showing the site boundaries and soil types, has been proposed because the information has not proven useful for purposes of making a permit decision.

Section 295.115. Plan for access roads.

Amendments to this section have been proposed to require that access roads be designed and constructed to handle truck traffic adequately. This requirement sets a performance standard by which to gauge the adequacy of proposed access roads.

Section 295.121. Composting pad design.

The proposed amendments allow for the use of vessels for composting. The changes in this section incorporate existing performance and design standards for vessels.

Operating Requirements

Section 295.201. Basic limitations.

Subsection (f) has been added to the proposed amendments to allow for implementation of the mitigation measures determined by the environmental assessment process during the appropriate time of site development. The subsection requires that all approved mitigation measures identified in the permit application be completed before a facility may accept waste, unless a later date is authorized in writing by the Department for technical reasons.

Section 295.202. Areas where composting facilities are prohibited.

Several changes have been proposed for this section. In subsection (a)(1), a composting facility may be sited in a 100-year floodplain if it can be demonstrated that the facility can be protected during flooding. A composting facility does not provide for permanent placement of waste and measures can easily be undertaken to prevent impacts from flooding. Amendments to subsection (a)(3), relating to buffer distances between a composting facility and wetlands that are not exceptional value wetlands, have been proposed to allow for smaller buffers if the storage and processing takes place in an enclosed facility. In subsection (a)(4), the buffer from sinkholes has been deleted because all water collected on the pad or in the vessel is contained and managed to prevent surface water contamination. In newly renumbered subsection (a)(5), the buffer between a composting facility and a perennial stream has been revised to allow a smaller buffer if the storage and processing takes place in an enclosed facility. In newly renumbered subsection (a)(6), the buffer between a property line and a composting facility has been revised to allow storage and processing closer than 50 feet from the property line if the activities take place in an enclosed facility. In newly renumbered subsection (a)(8), the prohibition for siting a facility in an area that has a seasonal high water table less than four feet from the surface has been replaced with a requirement that the pad or vessel not be in contact with the seasonal high water table. This change was made because all water collected on the pad or vessel will be contained and managed to prevent contamination. In newly renumbered subsection (a)(9), a new buffer requirement has been added to the proposed rulemaking. The new requirement has been added to be consistent with section 511 of Act 101, which requires an isolation distance of 300 yards between commercial residual waste treatment facilities and parks, playgrounds and schools. The property owner of the park, playground or school may provide a written waiver consenting to the facility being closer than 300 yards. Composting facilities permitted prior to the date of publication of these amendments as final-form regulations in the *Pennsylvania Bulletin* are not intended to be affected by the more stringent isolation distances proposed in this section when reissuance or renewal of the permit, or expansion of the permit area is sought.

Section 295.211. Signs and markers.

In subsection (a), proposed changes eliminate the prescriptive language about the size and content of signs and replace the requirement with a performance standard that the sign can be easily seen and read.

Section 295.212. Access roads.

Subsection (c) has been amended to require that an access road's drainage system comply with the erosion control requirements in Chapter 102. In subsection (d), language has been added that requires Departmental approval in a permit for the use of materials equivalent to asphalt, gravel, or cinders in paving access roads. This requirement was added to allow the Department to review materials proposed for use prior to their application to the site. A new performance standard, subsection (j), has been added to require that an access road be maintained to control dust and to prevent or control the tracking of mud on and offsite.

Section 295.214. Measuring and inspection of waste.

A new subsection (c) has been proposed to be added that requires an operator to inspect incoming waste to ensure that the waste received is consistent with this article and the permit unless otherwise approved by the Department.

Section 295.215. Equipment.

In subsection (b), the requirement that standby equipment must be located on the site or at the place where it can be available within 24 hours has been deleted. This requirement is redundant of the requirement in subsection (a) that the operator maintain on the site equipment necessary for the operation of the facility in accordance with the permit. In subsection (d), a separate frequency for cleaning equipment used to handle putrescible waste has been eliminated to allow for flexibility in the cleaning frequency based on the specific waste type.

Section 295.217. Air resources protection.

An amendment to subsection (a) includes a new cross reference to § 295.218 (relating to nuisance control).

Section 295.218. Nuisance control.

The performance standard in subsection (a) of the proposed amendments has been changed from requiring that vectors be prevented and eliminated to requiring that vectors be controlled and minimized. In subsection (b), the performance standard requiring the prevention and elimination of conditions that are harmful or that create nuisances has been changed to a performance standard requiring the control and minimization of the conditions. The level of protection the public will receive is the same under the existing and the proposed requirements. These proposed amendments more accurately reflect the standard practice for nuisance control.

Section 295.220. Litter.

A clarification to subsection (c) of the proposed amendments requires that "blown off and intercepted" litter be collected from fences, roadways, tree line barriers and other barriers.

Section 295.231. Composting pad or vessel.

This section has been modified throughout to allow for the use of a vessel for composting. In subsection (c)(1), the permeability standard has been deleted and replaced with a requirement that the pad or vessel be capable of preventing the migration of waste or leachate generated from the composting process. This change was made because materials used for a pad or vessel may not meet

the existing permeability standard but may prevent contamination. Subsection (f) has been deleted because the proposed changes in this section identify which requirements apply to in-vessel composting.

Section 295.253. Sedimentation ponds.

Subsection (b) has been amended to include a requirement that sedimentation ponds be operated and maintained in accordance with this section, Chapter 102, Chapter 105 and the minimum criteria in the United States Soil Conservation Service's Engineering Standard, 378, "Pond" Pa., as amended.

Section 295.255. Water supply replacement.

In subsection (a), new language has been included to clarify that when an operator adversely affects a water supply by degradation, pollution or other means, the operator must restore the affected supply. The proposed amendments include a new subsection (d) that explains what qualifies as a permanent water supply for purposes of water supply replacement. Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply, or extension of a private water supply. A permanent water supply does not include provision of bottled water or a water tank supplied by a bulk water hauling system. These modifications were made to be consistent with the municipal waste regulations.

Section 295.261. Hazard prevention.

The emergency procedures in this section have been modified to delete information already required in PPC Plan.

Section 295.271. Daily operational records.

A new requirement, subsection (b)(6), has been added to the daily operation record that requires the reporting of waste handling problems or emergency disposal facilities. This change was made because the requirement applies to all residual waste facilities and was inadvertently omitted from the recordkeeping requirements of this chapter.

Section 295.282. Cessation of operations.

A clerical error has been corrected in subsection (c) that clarifies Departmental approval is required to discontinue soil monitoring upon cessation of processing operations.

Chapter 297. Incinerators and Other Processing Facilities

Application Requirements

Section 297.103. Maps and related information.

A clarification has been made that the topographic map should contain the proposed permit area and adjacent area. Also, in paragraph (1), a requirement was added that the boundaries of the land within the proposed permit area be identified on the maps. In paragraph (4), the word "sources" has been substituted for "supplies" because not all water supplies are readily available by mapping or by field survey. Additionally, the requirement for the identification of the location of wells by the applicant has been changed to consideration of a 1/4-mile radius instead of 1/2-mile radius because this requirement has been proven unnecessary based on the performance of existing permitted processing facilities in the residual waste program to date.

Section 297.105. Plan for access roads.

Amendments to this section have been proposed to require that access roads be designed and constructed to handle truck traffic adequately. This requirement sets a performance standard by which to gauge the adequacy of proposed access roads.

Operating Requirements

Section 297.201. Basic limitations.

Subsection (f) has been added to the proposed amendments to allow for implementation of the mitigation measures determined by the environmental assessment process during the appropriate time of site development. The subsection requires that all approved mitigation measures identified in the permit application be completed before a facility may accept waste, unless a later date is authorized in writing by the Department for technical reasons.

Section 297.202. Areas where incinerators and other processing facilities are prohibited.

Amendments to subsection (a)(3), relating to buffer distances between a processing facility and wetlands that are not exceptional value wetlands, have been proposed to allow for smaller buffers if the storage and processing takes place in an enclosed facility. In subsection (a)(5), the buffer between a processing facility and a perennial stream has been revised to allow a smaller buffer if the storage and processing takes place in an enclosed facility. In subsection (a)(6), the buffer between a property line and a processing facility has been revised to allow storage and processing closer than 50 feet from the property line if the activities take place in an enclosed facility.

Section 297.211. Signs and markers.

In subsection (a), proposed changes eliminate the prescriptive language about the size and content of signs and replace the requirement with a performance standard that the sign can be easily seen and read.

Section 297.212. Access control.

Subsection (b) has been proposed to be revised to delete the reference to construction of a fence or barrier.

Section 297.213. Access roads.

Subsection (c) has been amended to require that an access road's drainage system comply with the erosion control requirements in Chapter 102. In subsection (d), language has been added that requires Departmental approval in a permit for the use of materials equivalent to asphalt, gravel, or cinders in paving access roads. This requirement was added to allow the Department to review materials proposed for use prior to their application to the site. A new performance standard, subsection (i), has been added to require that an access road be maintained to control dust and to prevent or control the tracking of mud on and offsite.

Section 297.214. Measuring and inspection of waste.

The proposed amendments include a new subsection (c) that requires an operator of a processing facility to inspect and monitor incoming waste for consistency with this article and the permit and to monitor for radioactive isotopes. This new requirement was added to address problems that have occurred at processing facilities.

Section 297.215. Equipment.

In subsection (b), the requirement that standby equipment must be located on the site or at the place where it can be available within 24 hours has been deleted. This requirement is redundant of the requirement in subsection (a) that the operator maintain on the site equipment necessary for the operation of the facility in accordance with the permit. In subsection (d), a separate frequency

for cleaning equipment used to handle putrescible waste has been eliminated to allow for flexibility in the cleaning frequency based on the specific waste type.

Section 297.216. Unloading area.

Subsection (b) has been proposed to be amended to allow drains or treatment systems to be connected to sanitary sewer systems if a waste characterization is submitted to the sewage treatment plant operator and the treatment plant operator can completely treat the waste stream. This change is consistent with the existing requirements for unloading areas for transfer facilities. Also, a proposed change to subsection (b) allows leachate to be collected in holding tanks prior to its transport to the sewage treatment plant. This requirement was added to provide for more flexibility in managing the leachate in areas where a facility cannot be feasibly connected to a sanitary sewer system.

Section 297.217. Cleaning and maintenance.

A proposed change to subsection (b) allows for an extension of time for storage of putrescible waste up to 72 hours over a weekend or 3-day weekend if the processing facility permit so provides.

Section 297.218. Air resources protection.

In subsection (a), the specific reference to Subpart C has been proposed to be deleted.

Section 297.219. Nuisance control.

The performance standard in subsection (a) of the proposed amendments has been changed from requiring that vectors be prevented and eliminated to requiring that vectors be controlled and minimized. In subsection (b), the performance standard requiring the prevention and elimination of conditions that are harmful or that create nuisances has been changed to a performance standard requiring the control and minimization of the conditions. The level of protection the public will receive is the same under the existing and the proposed requirements. These proposed regulations more accurately reflect the standard practice for nuisance control.

Section 297.221. Litter.

A clarification to subsection (c) of the proposed amendments requires that "blown off and intercepted" litter be collected from fences, roadways, tree line barriers and other barriers.

Section 297.232. Soil erosion and sedimentation control.

A cross reference to Chapter 102 has been proposed to be added to paragraph (1) to indicate that compliance with that chapter is required.

Section 297.234. Water supply replacement.

In subsection (a), new language has been included to clarify that when an operator adversely affects a water supply by degradation, pollution or other means, the operator must restore the affected supply. The proposed amendments include a new subsection (d) that explains what qualifies as a permanent water supply for purposes of water supply replacement. Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply, or extension of a private water supply. A permanent water supply does not include provision of bottled water or a water tank supplied by a bulk water hauling system. These proposed modifications have been made to be consistent with the municipal waste regulations.

Section 297.253. Implementation of contingency plan.

Subsection (c)(2) has been proposed to be revised to require Department approval for resumption of operation after a cleanup from an emergency.

Section 297.261. Daily operational records.

The proposed amendments include a new requirement, subsection (a)(10), which requires that a record of rejected waste loads and the reasons for rejecting the loads be included in the daily operational records. This requirement has been added to help identify and track problem wastes that are rejected at processing facilities.

Section 297.262. Annual operation report.

The fee has been changed in subsection (c)(1) from $1,900 for facilities that incinerate waste to $650. This proposed change was made to reflect the current costs of reviewing the annual report in conjunction with inspections conducted at these facilities.

Chapter 299. Storage and Transportation of Residual Waste

Section 299.101. Scope.

In subsection (b)(2), the proposed amendments expand the scope of types of waste to include waste tires.

Section 299.115. Nuisance control.

The performance standard in subsection (a)(2) of the proposed amendments has been changed from requiring that vectors be prevented to requiring that vectors be controlled and minimized. In subsection (b), the performance standard requiring the prevention and elimination of conditions that are harmful or that create nuisances has been changed to a performance standard requiring the control and minimization of the conditions. The level of protection the public will receive is the same under the existing and the proposed requirements. These proposed amendments more accurately reflect the standard practice for nuisance control.

Section 299.121. Containers.

In subsection (a), a new performance standard, requiring the prevention of leaks, has been added. In subsection (d), a requirements has been added that all containers be clearly labeled as "residual waste" or as the specific waste type of residual waste. This proposed new requirement will improve the management of residual waste by providing clear identification of the type of material being handled.

Section 299.122. Storage tanks.

The proposed amendments modify this section to clarify that all tanks that store residual waste must meet the design and performance standards established under the Storage Tank and Spill Prevention Act (35 P. S. §§ 6021.101—6021.2105). In addition, a new requirement was added that requires all tanks be clearly labeled as "residual waste" or as the specific waste type of residual waste. This requirement will improve the management of residual waste by providing clear identification of the type of material being handled.

Section 299.131. General requirements.

The proposed amendments include a new subsection (e) that allows the Department to require a person or municipality to install a water quality monitoring system in accordance with §§ 288.251—288.255. This requirement has been added because experiences in the field have proven that waste pile storage, without liners or pads, can result in groundwater degradation.

Section 299.144. Operating requirements.

Several clerical corrections have been made to this section. In subsection (a)(2), the cross reference to the section relating to access roads has been corrected. In subsection (a)(3), the cross references to sections relating to air resources protection and nuisance control have been modified to require the same protections as those that apply to transfer and processing facilities, rather than disposal facilities. In subsection (a)(8), the cross reference to § 289.522(a)(10) has been deleted to be consistent with changes proposed in Chapter 289. A new cross reference, § 289.522(a)(6), has been included to prevent conditions that may lead to complete failure based on sinkhole-prone geologic formations. In subsection (a)(9), clerical errors in the cross references have been corrected. Also, the phrase "notwithstanding the references to disposal" has been inserted in subsection (a)(9), (10) and (11) to clarify that the minimum requirements for acceptable waste will apply to storage impoundments. In subsection (a)(10) and (11), the words "shall be met" have been added to correct clerical errors. In subsection (a)(10)(i), a cross reference has been corrected and a new cross reference has been added to allow storage impoundments to be located where confined aquifers exist. In subsection (a)(11), a reference to § 289.432(a)—(c) was inadvertently omitted from the July 4, 1992, final-form regulations and has been added to this proposed rulemaking.

Section 299.155. Storage of waste tires and tire derived materials.

The proposed amendments include new requirements for the storage of waste tires. These requirements are proposed to be consistent with policies developed as a result of Act 190 and in response to many instances of improper management of tires that have resulted in abandoned tire piles.

Section 299.156. Notice by waste tire storage sites.

This new section is included in the proposed amendments to assist the Department in its identification of existing tire piles. Subsection (a) requires that each operator of a waste tire storage site file a notice that includes the following: a description of the types and number of waste tires and volume or weight of tire derived materials being stored; a description of the physical design of the site; the approximate date of initiation of operations; information showing how the operator will prevent long-term accumulation of tires and tire derived materials; verification of landowner consent to operate a waste tire storage site; and the address of the storage site and the individual responsible for operating the storage site. Under subsection (b), if a person or municipality becomes subject to §§ 299.155—299.163, based on the quantity thresholds of tires or tire derived materials in § 299.155(a), then a notice must be filed. Subsection (c) prohibits the operation of a waste tire storage site if a person fails to file the required notice within 6 months after the date the regulations are published as final-form regulations in the *Pennsylvania Bulletin*.

Section 299.157. General limitations on storage of waste tires and tire derived materials.

The proposed requirements in this new section include performance and design standards for indoor and outdoor storage of waste tires and tire derived material. The requirements for indoor storage are based on the "Standard for the Storage of Rubber Tires," published by the National Fire Protection Association. For outdoor storage, there are limits on the surface area that may be covered by piles, on the height of piles and on firebreak distances between piles and on mosquito propagation. A PPC Plan must be prepared and maintained at the storage facility. The proposed amendment include a 5-acre limit on the size of any waste tire or tire derived material storage facility. Also, there are limits on the number or amount of tires or tire derived material that may stored at a permitted processing or disposal facility.

Section 299.158. Areas where storage of waste tires or tire derived materials is prohibited.

The proposed requirements in this new section identify areas where the storage of waste tires and tire derived materials is prohibited. The requirements include buffers for storage in 100-year floodplains, in or within wetlands, near occupied dwellings, near sinkholes, near perennial streams, near water sources and near property lines.

Section 299.159. Access control.

This new section includes proposed requirements for preventing unauthorized access to a storage facility, by requiring barriers at access points, barriers around the storage areas and the availability of access to the facility only when an attendant is on duty.

Section 299.160. Hazard prevention.

This new section includes proposed requirements for preventing hazards and responding to events that may threaten public health, safety or the environment. The requirements include prohibitions on the burning of waste tires and tire derived materials, the availability of communications and alarm equipment, the availability of fire control equipment and sufficient water and foaming agents for containment of fires. The requirements also include immediate response activities in the event of an emergency.

Section 299.161. Soil and water protection.

This new section includes proposed performance standards for the protection of soil and water. The standards include minimization of runoff from and run-on to surface water.

Section 299.162. Annual report for waste tire storage sites.

This proposed new section establishes the requirements for reporting to the Department, on an annual basis, information pertaining to the quantities of waste received and managed at a storage facility and the locations of end-users of the waste shipped offsite.

Section 299.163. Cessation of operations.

This proposed new section requires proper management of wastes that exist at the time the storage facility ceases operations.

Section 299.201. Scope.

Subsection (a) has been amended to include a cross reference to § 285.218 (relating to signs on vehicles) because that section contains standards that apply to all types of solid waste. Also, subsection (b) includes a cross reference to § 285.218 for the same reason.

Section 299.219. Recordkeeping and reporting.

Subsection (a)(8), which requires that a daily record include the license plate number of the trailer transporting the waste, has been added to this section because of problems encountered in the field when enforcing the backhauling requirements.

F. *Benefits, Costs and Compliance*

Executive Order 1996-1 requires a cost/benefit analysis of the proposed amendments.

Benefits

The proposed amendments to the residual waste regulations eliminate requirements that are more stringent than standards imposed by Federal law; eliminate requirements which are no longer necessary or redundant; encourage performance based requirements; encourage green technologies; and support a pollution prevention approach.

The current residual waste regulations are largely performance based and include requirements for a source reduction strategy for pollution prevention. No comprehensive Federal requirements exist for the management of residual waste.

This proposed rulemaking amends certain terms and add additional terms which assist in the identification of materials which are considered waste and which are not considered waste, such as coproducts. To a large extent these new and revised terms are identical to terms defined under the hazardous waste program and the Federal waste management regulations. This will allow industry, already familiar with the Federal definition of "waste," to easily use the hazardous and residual definition of "waste."

The proposed amendments include provisions for industry wide coproduct determination and include a permit exemption for the beneficial use of scrap metal. These provisions streamline the requirements for recycling that has historically and safely been done in the past.

The proposed amendments include the assessment and abatement standards to clarify the interface with the Act 2 regulations for operating facilities.

To promote green technologies, the proposed amendments allow for the demonstration of new technology at existing facilities to be done through a permit modification process.

Compliance Costs

Although this is a large comprehensive rulemaking, it should not result in increased costs to the regulated community. The regulated community may realize savings up to $7 million due to changes in the definition of "waste," and the addition of industry-wide coproduct provisions. The revised assessment and abatement standards included to be consistent with the Act 2 regulations may also provide savings for facilities where groundwater degradation exists.

It is projected that there will be no increased costs or savings to local government for implementation or compliance monitoring activities associated with the regulations. The tire storage requirements have the potential to save local communities significant costs related to compliance monitoring and cleanup.

Compliance Assistance

The Department will assist the regulated community by developing a series of fact sheets explaining changes to the definitions of "waste" and related terms. In addition, the Department will continue to work with the Pennsylvania Chamber of Business and Industry and other industry groups at regularly scheduled intervals. The Department's field staff will provide compliance assistance during routine facility permitting and inspections.

Paperwork Requirements

The proposed amendments should result in a net reduction in paperwork requirements due to revisions to the definition of "waste" and related terms. A formal coproduct determination will not have to be done by the generator in instances where, for example, the materials are recycled by being used as an ingredient in an industrial process.

G. *Pollution Prevention*

The residual waste regulations have required generators to develop a source reduction strategy since 1992. No revisions to the highly successful source reduction strategy requirements have been proposed as part of this rulemaking.

H. *Sunset Review*

These proposed amendments will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

I. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on July 29, 1998, the Department submitted a copy of the proposed rulemaking to the Independent Regulatory Review Commission (IRRC), and the Chairpersons of the Senate and House Environmental Resources and Energy Committees. In addition to submitting the proposed amendments, the Department has provided IRRC and the Committees with a copy of a detailed regulatory analysis form prepared by the Department. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, if IRRC has objections to any portion of the proposed amendments, it will notify the Department within 10 days of the close of the Committees' review period. The notification shall specify the regulatory review criteria which have not been met by that portion. The Regulatory Review Act specifies detailed procedures for the Department, the Governor and the General Assembly to review these objections before final publication of the regulations.

J. *Public Comments*

Written Comments—Interested persons are invited to submit comments, suggestions or objections regarding the proposed amendments to the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477 (express mail: Rachel Carson State Office Building, 15th Floor, 400 Market Street, Harrisburg, PA 17101-2301). Comments submitted by facsimile will not be accepted. Comments, suggestions or objections must be received by October 14, 1998 (within 60 days of publication in the *Pennsylvania Bulletin*). Interested persons may also submit a summary of their comments to the Board. The summary shall not exceed one page in length and must also be received by October 14, 1998 (within 60 days following publication in the *Pennsylvania Bulletin*). The one-page summary will be provided to each member of the Board in the agenda packet distributed prior to the meeting at which the final regulations will be considered.

Electronic Comments—Comments may be submitted electronically to the Board at RegComments@A1.dep.state.pa.us must also be received by the Board by October 14, 1998. A subject heading of the proposal and a return name and address must be included in each transmission. If an acknowledgment of electronic comments is not

received by the sender within 2-working days, the comments should be retransmitted to ensure receipt.

K. *Public Hearings*

The Board will hold three public hearings for the purpose of accepting comments on this proposal. Each of the hearings will include an afternoon session beginning at 3 p.m. and an evening session beginning at 7 p.m. The dates and locations are listed below:

September 16, 1998	Department of Environmental Protection Southeast Regional Office Suite 6010, Lee Park 555 North Lane Conshohocken, Pa.
September 21, 1998	Sheraton Inn—Pittsburgh North 910 Sheraton Drive Mars, Pa.
September 22, 1998	Department of Environmental Protection Southcentral Regional Office Susquehanna River Conference Room 909 Elmerton Avenue Harrisburg, Pa.

Persons wishing to present testimony at a hearing are requested to contact Kate Coleman at the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477, (717) 787-4526, at least 1 week in advance of the hearing to reserve a time to present testimony. Oral testimony is limited to 10 minutes for each witness. Witnesses are requested to submit three written copies of their oral testimony to the hearing chairperson at the hearing. Organizations are limited to designating one witness to present testimony on their behalf at each hearing.

Persons in need of accommodations as provided for in the Americans with Disabilities Act of 1990 should contact Kate Coleman directly at (717) 787-4526 or through the Pennsylvania AT&T Relay Service at (800) 654-5984 (TDD) to discuss how the Department may accommodate their needs.

JAMES M. SEIF,
Chairperson

Fiscal Note: 7-336. (1) General Fund; (2) Implementing Year 1998-99 is $450,000; (3) 1st Succeeding Year 1990-00 is $375,000; 2nd Succeeding Year 2000-01 is $375,000; 3rd Succeeding Year 20001-02 is $375,000; 4th Succeeding Year 2002-03 is $375,000; 5th Succeeding Year 2003-04 is $375,000; (4) FY 1997-98 $7,291,000; FY 1996-97 $7,364,000; FY 1995-96 $6,382,000; (7) Department of Environmental Protection Subtotal. Licenses, Fees and Miscellaneous; (8) recommends adoption.

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

Subpart D. ENVIRONMENTAL HEALTH AND SAFETY

ARTICLE VI. GENERAL HEALTH AND SAFETY

CHAPTER 250. ADMINISTRATION OF LAND RECYCLING PROGRAM

Subchapter A. GENERAL PROVISIONS

§ 250.9. Interaction with other environmental statutes.

* * * * *

(b) Nothing in this chapter affects the permitting, operation, design, performance or closure requirements under the environmental protection acts or regulations thereunder. **[The groundwater standards in Subchapters B and C (relating to background standard; and Statewide health standards) apply as part of a Department-approved assessment and abatement plan that is implemented prior to closure of a solid waste facility and apply as the standards that shall be demonstrated to qualify for liner and leachate treatment system waivers or modifications as specified in Chapter 287 (relating to residual waste management—general provisions).]** The **remediation** standards **[in Subchapters B—D apply as groundwater standards for remediation of a release of a regulated substance at closure of a solid waste facility but]** as defined in Chapters 271 and 287 (relating to municipal waste management—general provisions; and residual waste management—general provisions), do not substitute for design and performance standards required under the solid waste management regulations. **See Articles VII—IX**. In the case of hazardous waste facilities, remediations shall comply with requirements applicable under the Resource Conservation and Recovery Act (42 U.S.C.A. §§ 6091—6986). **[The groundwater parameters and human health and environmental protection levels in Article IX (relating to residual waste) do not apply to groundwater remediations.]**

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ARTICLE IX. RESIDUAL WASTE

CHAPTER 287. RESIDUAL WASTE MANAGEMENT—GENERAL PROVISIONS

Subchapter A. GENERAL

§ 287.1. Definitions.

The following words and terms, when used in this article, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

***Abatement standards*—Background, Statewide health and risk-based standards as those terms are defined under this article.**

* * * * *

***Accumulated speculatively*—A material that is accumulated before being recycled.**

(i) The term does not include material if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that—during the calendar year (commencing on January 1)—the amount of material that is recycled or transferred to a different site for recycling, equals at least 75% by weight or volume of the amount of that material accumulated at the beginning of the period.

(A) In calculating the percentage of turnover, the 75% requirement is to be applied to each material of the same type—for example, slags from a single smelting process—that is recycled in the same way (that is, from which the same material is recovered or that is used in the same way).

(B) Materials that are already defined as wastes also are not to be included in making the accumulation.

(ii) Materials are no longer in this category once they are removed from accumulation for recycling.

* * * * *

[***Asbestos containing waste*—Waste that contains asbestos extracted from asbestos ore. As applied to demolition and renovation operations, the term includes friable asbestos and nonfriable asbestos from Asbestos Hazard Emergency Response Act (AHERA) (15 U.S.C.A. §§ 2601 note, 2614, 2618, 2619, 2641—2654; and 20 U.S.C.A. §§ 4014, 4014 note, 4021 and 4022) regulated removals. The term also includes asbestos waste collected from pollution control devices.]**

* * * * *

***Background standard*—A numerical value as determined under section 302 of the Land Recycling and Environmental Remediation Standards Act (35 P. S. § 6026.302) and § 250.202 (relating to establishing concentrations).**

* * * * *

By-product—A material **[generated by a manufacturing or production process]** that is not **[a product or coproduct, regardless of whether it has value to the generator or another person] one of the primary products of a production process or a coproduct and is not solely or separately produced by the production process.**

* * * * *

Clean fill—Uncontaminated, nonwater-soluble, **[inert solid material used to level an area or bring the area to grade] brick and block, concrete, used asphalt, dredged material that has been sampled and analyzed in accordance with Department-approved tests, soils, stone, rock, gravel and waste from land clearing, grubbing and excavation, including trees, brush, stumps and vegetative material.** The term **includes de minimis levels of contamination and** does not include materials placed in or on the waters of this Commonwealth **unless approved by the Department. A person using the material as clean fill has the burden of proof to demonstrate that the material is clean fill.**

* * * * *

Coproduct—

(i) A material generated by a manufacturing or production process, or **[an expended] a spent** material, of a physical character and chemical composition that is consistently equivalent to the physical character and chemical composition of an intentionally manufactured product or produced raw material, if the use of the material presents no greater threat of harm to human health and the environment than the use of the product or raw material. **A coproduct determination only applies to materials that will be applied to the land or used to produce products that are applied to the land, including the placement of roadway aggregate, pipe bedding or construction materials, or that will be used for energy recovery with a minimum Btu value of 8,000.**

(ii) The term only applies to one of the following:

(A) If the material is to be transferred in good faith as a commodity in trade, for use in lieu of an intentionally manufactured product or produced raw material, without processing that would not be required of the product or raw material, and the material is **[actually used on a regular basis] not accumulated speculatively. Sizing, shaping or sorting of the material will not be considered processing for the purpose of this definition.**

(B) If the material is to be used by the manufacturer or producer of the material in lieu of an intentionally manufactured product or produced raw material, without processing that would not be required of the product or raw material, and the material is **[actually used on a regular basis] not accumulated speculatively. Sizing, shaping or sorting of the material will not be considered processing for the purpose of this definition.**

(iii) If no product or produced raw material exists for purposes of chemical and physical comparison, the Department will review, upon request, information provided and determine whether the material is a coproduct because it is an effective substitute for an intentionally manufactured product or produced raw material, based on the criteria in subparagraph (ii) and whether the material presents a threat of harm to human health and the environment in accordance with § 287.8 (relating to coproduct determinations).

[(iii)] (iv) * * *

[(iv) A person] (v) Persons producing, selling, transferring, possessing or using a material **[as] who claim that the material is** a coproduct **[has the burden of proving, by a preponderance of evidence, that the material is a coproduct,]** and not a waste **shall demonstrate that there is a known market or disposition for the material, and that they meet the terms of this definition and § 287.8. In doing so, they shall provide appropriate documentation, such as contracts showing that a second person uses the material as an ingredient in a production process, to demonstrate that the material is not a waste.**

* * * * *

***Dredged material*—Material dredged or excavated from waters for the direct or indirect purpose of establishing or increasing water depth, or increasing the surface or cross-sectional area of a waterway and which includes sediment, soil, mud, shells, gravel or other aggregate.**

* * * * *

[***Expended material*—A material, including a product or coproduct, that has been used for a specific purpose and which can no longer be effectively used for that purpose, without processing or treatment.]**

* * * * *

Groundwater degradation—A measurable increase in the concentration of one or more contaminants in groundwater above background **[levels] concentrations** for those contaminants.

[***Groundwater parameter*—For purposes of this article, the groundwater parameter for a contaminant shall be:**

(i) The final maximum contaminant level goal (MCLG) for the contaminant determined by the

EPA under the Safe Drinking Water Act (21 U.S.C.A. § 349; 42 U.S.C.A. §§ 300f—300j25), if one exists, unless the MCLG is 0.

(ii) For contaminants for which no MCLG has been established, or for contaminants for which the MCLG has been established as 0, the final primary maximum contaminant level (MCL) for the contaminant determined by the EPA under the Safe Drinking Water Act, if one exists.

(iii) For contaminants for which no MCLG has been established or for which the MCLG has been established as 0, and for which no MCL has been established, the final secondary maximum contaminant level (SMCL) for the contaminant determined by the EPA under the Safe Drinking Water Act, if one exists.

(iv) For other contaminants, the more stringent of the following concentrations:

(A) For EPA Class A or Class B carcinogens, as specified in the EPA's IRIS or its successor, 0.000035 divided by the oral cancer slope factor of the contaminant in units of (mg/kg/day)−1 obtained from IRIS or its successor. The quotient shall be expressed in units of mg/l. Information about IRIS and access methods to IRIS may be obtained from IRIS User Support (MS-190), Environmental Criteria and Assessment Office, Office of Research and Development, United States Environmental Protection Agency, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45286.

(B) For contaminants which produce noncarcinogenic effects, 35 times the oral chronic reference dose in units of mg/kg/day obtained from IRIS or its successor. The product shall be expressed in units of mg/l.]

* * * * *

[***Human health and environmental protection levels*—A standard of protection based upon the most stringent of maximum contaminant levels, secondary MCLs, Department-established cancer risk levels, threshold levels that are protective of human health, and other standards that are protective of the environment.]**

* * * * *

Land application—The **management of solid waste through** agricultural utilization **[,] or** land reclamation **[or surface land disposal]**. The term does not include the disposal of solid waste in a landfill or disposal impoundment.

* * * * *

***Municipal-like residual waste*—Residual waste that has the same physical and chemical characteristics as residential municipal waste.**

* * * * *

Product—A commodity that is the sole or primary intended result of a manufacturing or production process. **[The term does not include materials that do not meet industry or manufacturing quality specifications or are otherwise off-specification; the materials may be coproducts.]**

* * * * *

***Reclaimed*—A material is "reclaimed" if it is processed to recover a usable product, or if it is regenerated.**

***Recycled*—A material is "recycled" if it is used, reused or reclaimed.**

* * * * *

***Remediation standards*—Background, Statewide health and site-specific standards as those terms are defined under this article.**

* * * * *

***Risk-based standard*—A risk-based abatement standard for substances that have no primary MCLs under the Federal and State Safe Drinking Water Acts (42 U.S.C.A. §§ 300f—300j-18 and 35 P. S. §§ 721.1—721.17) for carcinogens.**

(i) The standard represents a concentration associated with an excess lifetime cancer risk level between 1 × 10-4 and 1 × 10-6, including the cumulative risk of all contaminants.

(ii) For systemic toxicants, the standard represents a concentration to which the human population (including sensitive subgroups) could be exposed on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime.

(iii) When several systemic toxicants affect the same target organ or act by the same method of toxicity, the hazard index may not exceed one.

* * * * *

***Scrap metal*—Bits and pieces of metal parts—for example—bars, turnings, rods, sheets and wire—or metal pieces that may be combined together with bolts or soldering—for example, radiators, scrap automobiles and railroad box cars—and which when worn or superfluous, can be reused.**

* * * * *

***Secondary contaminants*—A substance for which a secondary MCL exists, and no lifetime health advisory level exists.**

* * * * *

***Site-specific standard*—A numerical value as determined under section 304 of the Land Recycling and Environmental Remediation Standards Act (35 P. S. § 6026.304) and Subchapter F (relating to exposure and risk determinations).**

* * * * *

Special handling waste—Solid waste that requires the application of special storage, collection, transportation, processing or disposal techniques due to the quantity of material generated or its unique physical, chemical or biological characteristics. The term includes sewage sludge, infectious waste, chemotherapeutic waste, ash residue from a solid waste incineration facility, **friable** asbestos containing waste**,** PCB containing waste and waste oil that is not hazardous waste **[oil, fuel contaminated soil, waste tires and water supply treatment plant sludges]**.

***Spent material*—Material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.**

* * * * *

***Statewide Health Standard*—A numerical value as determined under section 303 of the Land Recycling and Environmental Remediation Standards Act (35 P. S. § 6026.303) and §§ 250.304, except for subsection (d), 250.305 and 250.308 (relating to MSCS for groundwater; MSCS for soil; and soil to groundwater pathway numeric values).**

* * * * *

***Steel slag*—The uncontaminated, nonwater-soluble, inert solid material generated in the making of steel in an electric arc furnace, open hearth furnace, blast furnace or secondary steel-refining process.**

* * * * *

[***Use or reuse of a waste*** **]** ***Used or reused*—A material that meets one of the following conditions:**

(i) **[The procedure whereby a waste is directly employed in one of the following:**

(A) A] The material is employed as an ingredient, **including use as an intermediate,** in an industrial process to make a product **[, unless]. A material will not satisfy this condition if** distinct components of the **[waste] material** are recovered as separate end products, **as when metals are recovered from metal-containing secondary materials**.

[(B) In] (ii) The material is employed in a particular function or application as an effective substitute for a commercial product.

[(ii) The term does not include source reduction or an activity that occurs during the generation of the waste].

* * * * *

Waste—

[(i) One or more of the following:

(A) A by-product.

(B) An expended material that is not a coproduct.

(C) A material that is abandoned or disposed, including abandoned or disposed products or coproducts.

(D) A contaminated soil, contaminated water or other residue from the dumping, deposition, injection, spilling or leaking of a material into the environment.

(ii) The term does not include:

(A) Materials that are directly recycled or reused onsite in an ongoing manufacturing or industrial process by the generator of the material, without treatment or processing or release into the environment.

(B) Materials determined not to be a waste under § 287.7 (relating to determination that a material is no longer a waste) if the materials are used in accordance with the terms of the determination.

(C) Materials from the slaughter and preparation of animals that are used as raw materials in the production or manufacture of products.]

(i) Discarded material which is recycled or abandoned. A waste is abandoned by being disposed of, burned or incinerated or accumulated, stored or processed before or in lieu of being abandoned by being disposed of, burned or incinerated. A discarded material includes contaminated soil, contaminated water, contaminated dredge material, spent material or by-product recycled in accordance with subparagraph (ii)(B), processed or disposed.

(ii) Materials that are not waste when recycled include materials when they can be shown to be recycled by being:

(A) Used or reused as ingredients in an industrial process to make a product or employed in a particular function or application as an effective substitute for a commercial product, provided the materials are not being reclaimed. This includes materials from the slaughter and preparation of animals that are used as raw materials in the production or manufacture of products. Steel slag is not waste if used onsite as a waste processing liming agent in acid neutralization or onsite in place of aggregate. Sizing, shaping or sorting of the material will not be considered processing for the purpose of this subclause of the definition.

(B) Coproducts.

(C) Returned to the original process from which they are generated, without first being reclaimed or land disposed. The material shall be returned as a substitute for feedstock materials. When the original process to which the material is returned is a secondary process, the materials shall be managed so that there is no placement on the land and the secondary process takes place onsite.

(ii) The following materials are wastes, even if the recycling involves use, reuse or return to the original process (as described as follows):

(A) Except for coproducts, materials used in a manner constituting disposal, or used to produce products that are applied to the land.

(B) Except for coproducts, materials burned for energy recovery, used to produce fuel or contained in fuel.

(C) Materials accumulated speculatively.

(iii) A discarded or recycled material may not be waste if a determination is made by the Department in accordance with § 287.7 (relating to determination that a material is no longer a waste).

(iv) In enforcement actions implementing the act, a person who claims that the material is not a waste in accordance with subparagraph (ii) shall demonstrate that there is a known market or disposition for the material, and that the terms of the exclusion have been met. In doing so, appropriate documentation shall be provided (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste. In addition, owners or operators of facilities claiming that they actually are recycling materials shall show that they have the necessary equipment to do so.

***Waste classification standard*—For purposes of this article, the waste classification standard for a contaminant shall be:**

(i) The final maximum contaminant level goal (MCLG) for the contaminant determined by the Department or the EPA under the Safe Drinking

Water Acts (21 U.S.C.A. § 349; 42 U.S.C.A. §§ 300f—300j-25; and 35 P. S. §§ 721.1—721.17), if one exists, unless the MCLG is 0.

(ii) For contaminants for which no MCLG has been established, or for contaminants for which the MCLG has been established as 0, the final primary maximum contaminant level (MCL) for the contaminant determined by the Department or the EPA under the Safe Drinking Water Acts, if one exists.

(iii) For contaminants for which no MCLG has been established or for which the MCLG has been established as 0, and for which no MCL has been established, the final secondary maximum contaminant level (SMCL) for the contaminant determined by the Department or the EPA under the Safe Drinking Water Acts, if one exists.

(iv) For other contaminants, the more stringent of the following concentrations:

(A) For EPA Class A or Class B carcinogens, as specified in the EPA's IRIS or its successor, 0.000035 divided by the oral cancer slope factor of the contaminant in units of (mg/kg/day)-1 obtained from IRIS or its successor. The quotient shall be expressed in units of mg/l. Information about IRIS and access methods to IRIS may be obtained from IRIS User Support (MS-190), Environmental Criteria and Assessment Office, Office of Research and Development, United States Environmental Protection Agency, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45286.

(B) For contaminants which produce noncarcinogenic effects, 35 times the oral chronic reference dose in units of mg/kg/day obtained from IRIS or its successor. The product shall be expressed in units of mg/l.

[***Waste reclamation*—**

(i) The processing of a waste in one or more of the following ways:

(A) To recover a usable product.

(B) To recover distinct components as separate end products.

(C) To make waste suitable for use or reuse, through regeneration or otherwise.

(ii) The term does not include source reduction or an activity that occurs during the generating of residual waste.]

* * * * *

§ 287.2. Scope.

* * * * *

(b) Management of the following types of residual waste is subject to Subpart D, Article VIII (relating to municipal waste) instead of this article, and shall be regulated as if the waste is municipal waste regardless of whether the waste is a municipal waste or residual waste:

* * * * *

(3) Sewage sludge, including sewage sludge that is mixed with **[other] a small quantity of** residual waste.

* * * * *

(c) Management of the following types of waste is subject to this article instead of Article VIII, and shall be regulated as if the waste is residual waste, regardless of whether the waste is municipal waste or residual waste:

* * * * *

(2) Waste oil that is not hazardous waste **[oil]**.

(3) Waste tires **and autofluff**.

(4) **[Fuel contaminated] Contaminated** soil.

* * * * *

(6) Dredged material.

(d) The disposal, processing, storage and transportation at a municipal waste management facility of the following types of special handling waste is subject to the applicable additional requirements for the disposal, processing, storage and transportation of these wastes in this article, and shall be regulated as if the waste is residual waste regardless of whether the waste is municipal waste or residual waste:

(1) **[Asbestos] Friable** asbestos containing waste.

* * * * *

§ 287.8. Coproduct determinations.

(a) In addition to meeting the conditions of the definition of "coproduct" in § 287.1 (relating to definitions), a person performing a coproduct determination shall evaluate chemical composition and threat of harm to the environment and public health in accordance with this section. A proposed coproduct may not present a greater threat of harm to human health and the environment than use of an intentionally manufactured product or produced raw material. A greater threat of harm is presented if one of the following is met:

(1) For comparison of the proposed coproduct with a product or produced raw material, hazardous or toxic constituents are present at elevated levels unless an assessment of hazardous and toxic constituents demonstrates that the constituents are not biologically available.

(2) For a proposed coproduct where no product or produced raw material will be replaced, an assessment of hazardous and toxic constituents demonstrates that the constituents are not biologically available.

(b) If the proposed coproduct is being compared to an intentionally manufactured product or produced raw material, a person performing a coproduct determination shall demonstrate that the use of a proposed coproduct does not present a greater threat of harm to human health and the environment by performing the following:

(1) An evaluation to determine which, if any, hazardous or toxic constituents are present in the proposed coproduct at levels exceeding those found in the material it is replacing.

(2) An evaluation of the total levels of hazardous or toxic constituents, including the constituents in § 261.34(e) (relating to appendices), to determine whether the total levels of constituents contained in the proposed coproduct exceed the total levels found in the intentionally manufactured product or produced raw material it is replacing. Based on

generator knowledge, if a hazardous or toxic constituent is not present evaluation of total levels is not required.

(3) An evaluation of the levels of leaching of hazardous or toxic constituents, including the constituents in § 261.34(e), to determine whether the levels of leaching from the proposed coproduct exceed the levels of leaching from the manufactured product or produced raw material it is replacing, based on a leaching procedure that is appropriate for the intended use of the proposed product. Based on generator knowledge, if a hazardous or toxic constituent is not present evaluation of leaching levels is not required.

(4) The routes of exposure to humans and ecological receptors shall be identified. These routes of exposure shall include ingestion, inhalation, dermal contact, leaching to the groundwater, plant uptake and surface runoff potential. Mitigating circumstances, such as protective gear worn by workers to reduce exposure during processing or application of the proposed coproduct, shall be identified.

(5) The use of a 95% upper confidence interval, using the "test methods for evaluating solid waste" (EPA SW-846), may be applied to the comparisons of constituent levels between the proposed coproduct and the intentionally manufactured product or produced raw material it is replacing.

(c) If the proposed coproduct is not being compared to an intentionally manufactured product or produced raw material, a person performing a coproduct determination shall demonstrate that the presence of hazardous or toxic constituents are not biologically available by performing the following:

(1) An evaluation of the total levels of hazardous or toxic constituents, including the constituents in § 261.34(e). Based on generator knowledge, if a hazardous or toxic constituent is not present evaluation of total levels is not required.

(2) An evaluation of the levels of leaching of hazardous or toxic constituents, including the constituents in § 261.34(e). Based on generator knowledge, if a hazardous or toxic constituent is not present evaluation of leaching levels is not required.

(3) The routes of exposure to humans and ecological receptors shall be identified. These routes of exposure include ingestion, inhalation, dermal contact, leaching to the groundwater, plant uptake and surface runoff potential. Mitigating circumstances, such as protective gear worn by workers to reduce exposure during processing or application of the proposed coproduct, shall be identified.

(4) The use of a 95% upper confidence interval, using the "Test Methods for Evaluating Solid Waste" (EPA SW-846), may be applied to the analytical results of the constituents evaluated.

(d) A person who completes a coproduct determination shall maintain documentation supporting the determination. This documentation shall be available to the Department upon request.

(e) A person who completes a coproduct determination shall provide documentation supporting the determination to persons selling, transferring, possessing or using the material.

§ 287.9. Industry-wide coproduct determinations.

(a) Based on existing documentation for coproduct determinations, the Department may determine that, on an industry-wide basis, classes of materials are coproducts for specific uses if the following conditions are met:

(i) Chemical and physical characteristics of the material generated do not vary over time.

(ii) Historical use of the material complies with industry standards and specifications.

(iii) Historical use of the material over an extended time period has demonstrated that the material, when used as specified, performs as an effective substitute for an intentionally manufactured product or produced raw material.

(iv) There is historical documentation that a market for the material and its use exists.

(v) Historical use of the material does not violate the environmental protection acts or regulations thereunder and does not harm or present a threat of harm to public health, safety, welfare or the environment based on an evaluation under § 287.8 (relating to coproduct determinations).

(b) The Department may establish a list of approved coproducts that meet the requirements of subsection (a). The Department will publish notice of its intent to establish or modify the list in the *Pennsylvania Bulletin* and will establish a comment period of at least 30 days. After the close of the 30-day comment period, the Department will publish the final list or any modification to the final list in the *Pennsylvania Bulletin*.

(c) The Department may remove an approved coproduct from the list if it finds that one or more of the criteria used as a basis for the Department's determination was incorrect, or new information has become available that invalidates the determination. Removal of an approved coproduct from the list will be published in the *Pennsylvania Bulletin* with a comment period of at least 30 days. After the close of the comment period, the Department will publish any modification of the list in the *Pennsylvania Bulletin*.

Subchapter B. DUTIES OF GENERATORS

§ 287.51. Scope.

(a) A person or municipality that generates more than an average of 2,200 pounds of residual waste per generating location per month based on generation in the previous year shall **[submit a] comply with the** biennial report and source reduction strategy under §§ 287.52 and 287.53 (relating to biennial report; and source reduction strategy).

* * * * *

§ 287.52. Biennial report.

(a) By **[January 4, 1993, and by]** March 1 of each odd numbered year **[thereafter]**, a person or municipality subject to this subchapter shall file a report with the Department.

* * * * *

§ 287.53. Source reduction strategy.

* * * * *

(b) For each type of waste generated, the strategy shall include:

(1) A description of the source reduction activities conducted by the person or municipality in the 5 years prior to the date that the strategy is required to be prepared. The description shall quantify reductions in the weight or toxicity of waste generated on the premises. **[The first strategy prepared by a person or municipality under this section shall describe source reduction activities conducted by the person or municipality in the 5 years prior to July 4, 1992, if the generator has sufficient records to accurately document these activities.]**

* * * * *

§ 287.54. Chemical analysis of waste.

(a) In accordance with subsection (b), a person or municipality subject to this subchapter shall:

* * * * *

(3) Evaluate the potential for the waste and the constituents in the waste to leach into the environment.

[(3)] (4) Submit a copy of the analysis, determination and a record of laboratory quality control procedures and the use of those procedures to the Department on forms prepared by the Department and to each solid waste management facility which accepts or proposes to accept the waste from the person or municipality for processing or disposal in accordance with written approval from the Department. The information which shall be submitted to a solid waste management facility may be limited to information pertaining to the particular types of waste which the facility receives in accordance with Departmental approval. The submittal of quality control procedures and procedure information may be waived by the Department if the **[generator] information** has previously **been** submitted **[the information]** to the Department.

* * * * *

(g) The Department may, in writing, waive **or modify** the requirements of this section for special handling waste **and municipal-like residual waste**.

§ 287.55. **[Small quantity generator] retained** recordkeeping **[requirements]**.

(a) A person or municipality that generates **[an average of 2,200 pounds or less of]** residual waste **[per generating location per month based on generation in the previous year, or which is otherwise exempted from this subchapter,]** shall:

* * * * *

Subchapter C. GENERAL REQUIREMENTS FOR PERMITS AND PERMIT APPLICATIONS

GENERAL

§ 287.101. General requirements for permit.

* * * * *

(b) A person or municipality is not required to obtain a permit under this article, comply with the bonding or insurance requirements of Subchapter E (relating to bonding and insurance requirements) or comply with Subchapter B (relating to duties of generators) for one or more of the following:

(1) Agricultural waste produced in the course of normal farming operations, if the waste is not hazardous. An agricultural waste will be presumed to be produced in the course of normal farming operations if its application is consistent with that for normal farming operations. **A person managing mushroom waste shall implement best management practices. The Department will prepare a manual for the management of mushroom waste which identifies best management practices and may approve additional best management practices on a case-by-case basis. If a person fails to implement best management practices for mushroom waste, the Department may require compliance with the land application, composting and storage operating requirements of Chapters 291, 295 and 299 (relating to land application of residual waste; composting facilities for residual waste; storage and transportation of residual waste).**

(2) The use of food processing waste or food processing sludge in the course of normal farming operations if the waste is not hazardous **[and if the land application of food processing waste or food processing sludge complies with the operating requirements of Chapter 291 (relating to land application of residual waste), unless waived or modified by the Department]. A person managing food processing waste shall implement best management practices. The Department will prepare a manual for the management of food processing waste which identifies best management practices and may approve additional best management practices on a case-by-case basis. If a person fails to implement best management practices for food processing waste, the Department may require compliance with the land application, composting and storage operating requirements of Chapters 291, 295 and 299.**

* * * * *

(6) **[The use as clean fill of the materials in subparagraphs (i) and (ii) if they are separate from other waste. The person using the material as clean fill has the burden of proof to demonstrate that the material is clean fill.**

(i) The following materials, if they are uncontaminated: soil, rock, stone, gravel, brick and block, concrete and used asphalt.

(ii) Waste from land clearing, grubbing and excavation, including trees, brush, stumps and vegetative material.] Processing that results in the beneficial use of scrap metal.

* * * * *

§ 287.102. Permit-by-rule.

(a) *Purpose.*

* * * * *

(3) A facility is not subject to permit-by-rule under this section unless the operator **prepares and** maintains the following at the facility in a readily accessible place:

* * * * *

TRANSITION SYSTEM FOR EXISTING FACILITIES

§ 287.112. Storage impoundments and storage facilities.

* * * * *

(f) Modification of operating requirements on repermitting are as follows:

(1) For residual waste storage impoundments permitted and constructed on or before July 4, 1992, the Department may waive or modify the liner system and leachate treatment system requirements that would otherwise be applicable under this article if the following conditions are met:

* * * * *

(ii) The operator demonstrates based on sampling and analysis data taken by the operator or the Department that groundwater degradation from the facility does not exceed one of the following for any contaminant:

(A) The **[groundwater parameter] Statewide health standard** for the contaminant at **[one or more monitoring points] the property boundary**.

(B) **[Background levels] The background standard** for the contaminant at the property boundary.

* * * * *

§ 287.115. Filing by permitted facilities.

* * * * *

(c) *Modification*.

(1) For residual waste landfills permitted under the act before July 4, 1992, and residual waste disposal impoundments permitted under the act or The Clean Streams Law before July 4, 1992, the Department may waive or modify the liner system and leachate treatment requirements that would otherwise be applicable under this article after approval of a complete application for permit modification, if the following conditions are met:

* * * * *

(ii) The operator demonstrates one of the following in the preliminary application:

(A) Groundwater degradation from the facility, based on sampling and analysis data for a 1 year period that meets the requirements of this article, does not exceed the **[groundwater parameter for a contaminant at one or more monitoring points, or background levels for a contaminant] background or Statewide health standard for a contaminant** at the property boundary.

(B) The operator has complied and will continue to comply with the applicable requirements for groundwater assessment and groundwater abatement in this article and has demonstrated that the abatement will result in restoration of the groundwater to levels that are at least equivalent to the **[groundwater parameters] background or Statewide health standards for a contaminant at the property boundary**. It is not necessary, for purposes of this demonstration, that restoration of groundwater to these levels occur before closure. However, this paragraph in no way alters the operator's obligations for final closure certification under § 287.342 (relating to final closure certification) or as otherwise provided in Subchapter E (relating to bonding and insurance requirements).

* * * * *

(4) The liner system and leachate treatment system requirements may not be modified or waived for areas identified in an application for a new permit or permit modification submitted after July 4, 1997.

* * * * *

(g) A person or municipality that is required under subsection (e) or (f) to cease storage, disposal or processing of waste shall submit a closure plan under § 287.117 (relating to closure plan). An application for a new permit shall be filed in accordance with this article to receive, process or dispose of solid waste.

§ 287.117. Closure plan.

(a) A closure plan for a residual waste processing or disposal facility submitted under § 287.113 or 287.115 (relating to permitting procedure for unpermitted processing or disposal facilities; and filing by permitted facilities) shall show how the operator plans to close in a manner that will protect public health, safety and the environment. Except as provided in subsections **[(b)] (c)** and **[(c)] (d)**, the closure plan shall be consistent, at a minimum, with the applicable regulations for the type of facility concerning the following:

* * * * *

(b) The Department may waive or modify the applicable regulations concerning subsection (a) if a person or municipality can demonstrate that an existing system or design performs at a level that is equivalent to the applicable regulations.

[(b)] (c) ***

[(c)] (d) ***

[(d)] (e) ***

[(e)] (f) ***

[(f)] (g) ***

* * * * *

[(g)] (h) ***

* * * * *

[(h)] (i) ***

(j) Groundwater degradation at a solid waste facility that ceased receiving waste after September 7, 1980, shall be remediated in accordance with one of the following:

(1) An approved closure plan, permit or any prior administrative consent order, consent adjudication, judicially approved consent order or other settlement agreement entered into with the Department.

(2) Section 287.342(c) (relating to final closure certification), if paragraph (1) is not applicable or if a remediation is conducted under a document in paragraph (1) that has been so modified and approved.

GENERAL APPLICATION REQUIREMENTS

§ 287.127. Environmental assessment.

(a) *Impacts*. Each environmental assessment in a permit application shall include a detailed analysis of the potential impact of the proposed facility on the environment, public health and public safety, including traffic, aesthetics, air quality, water quality, stream flow, fish and wildlife, plants, aquatic habitat, threatened or endangered species, water uses and land use. The applicant shall consider environmental features such as **scenic rivers,** recreational river corridors, State and Federal forests and parks, the Appalachian trail, historic and archaeological sites, National wildlife refuges, State natural areas, **National landmarks,** prime farmland,

wetland, special protection watersheds designated under Chapter 93 (relating to water quality standards), public water supplies and other features deemed appropriate by the Department or the applicant.

(b) **[The Department, after consultation with appropriate governmental agencies and potentially affected persons, will evaluate the assessment provided under subsection (a) to determine whether the proposed operation has the potential to cause environmental harm. If the Department determines that the proposed operation has that potential, it will notify the applicant in writing.]** ***Harms.*** **The environmental assessment shall describe the known and potential environmental harms of the proposed project. The applicant shall provide the Department with a written mitigation plan which explains how the applicant plans to mitigate each known or potential environmental harm identified and which describes any known and potential environmental harms not mitigated. The Department will review the assessment and mitigation plans to determine whether there are additional harms and whether all known and potential environmental harms will be mitigated. In conducting its review, the Department will evaluate each mitigation measure and will collectively review mitigation measures to ensure that individually and collectively they adequately protect the environment and the public health, safety and welfare.**

(c) **[If the Department or the applicant determines that the proposed operation may cause environmental harm, the applicant shall provide the Department with a written explanation of how it plans to mitigate the potential harm, through alternatives to the proposed facility or portions thereof, including alternative locations, traffic routes or designs, or other appropriate mitigation measures.]** ***Noncaptive landfills, disposal impoundments and incinerators.*** **If the application is for the proposed operation of a noncaptive landfill, disposal impoundment or incinerator, the applicant shall demonstrate that the benefits of the project to the public clearly outweigh the known and potential environmental harms. In making this demonstration, the applicant shall describe in detail the benefits relied upon. The benefits of the project shall consist of social and economic benefits that remain after taking into consideration the known and potential social and economic harms of the project and shall also consist of the environmental benefits of the project, if any.**

(d) **[The applicant shall describe in writing the social and economic benefits of the project to the public if one of the following applies:**

(1) The application is for a residual waste landfill or residual waste disposal impoundment.

(2) The application is for another type of facility, and the Department determines, after consultation with appropriate governmental agencies and potentially affected persons, that the potential for significant environmental harm remains despite the mitigation measures described in subsection (c).] ***Other facilities.*** **If the application is for the proposed operation of another type of facility and the applicant or the Department upon review determines that known or potential environmental harm remains despite the mitigation measures described in the mitigation plans, the applicant shall demonstrate that the benefits of the project to the public clearly outweigh the remaining known and potential environmental harms. In making this demonstration, the applicant shall describe in detail the benefits relied upon. The benefits of the project shall consist of social and economic benefits that remain after taking into consideration the known and potential social and economic harms of the project and shall also consist of the environmental benefits of the project, if any.**

(e) **[The description shall include a detailed explanation of the need for the facility and the consistency of the facility with municipal, county or regional solid waste plans approved by the Department.]** ***Identification of harms and benefits.*** **Known and potential harms and benefits of a proposed project may also be identified by the Department or any other person or municipality.**

(f) ***Evaluation.*** **After consultation with other appropriate agencies and potentially affected persons, the Department will evaluate the environmental assessment in Phase I of permit review or otherwise prior to technical review.**

(g) ***Revision.*** **The Department may require submission of a revised environmental assessment if additional harms or potential harms are discovered during any phase of permit application review.**

WASTE ANALYSIS

§ 287.131. Scope.

(a) Sections 287.132—287.134 (relating to chemical analysis of waste; source reduction strategy; and waste analysis plan) apply to residual waste management facilities that apply to receive residual waste **[for processing or disposal]**. Sections 287.132—287.134 do not apply to:

* * * * *

§ 287.132. Chemical analysis of waste.

(a) *Application.*

(1) An application shall contain the following information for each waste on a form provided by the Department:

* * * * *

(v) If the waste will be disposed of at a residual waste landfill or residual waste disposal impoundment, a demonstration that the waste meets the requirements for disposal at the facility **without adversely affecting the effectiveness of the liner or leachate treatment system.**

* * * * *

(4) The Department may, in writing, waive or modify the evaluation required by this subsection for waste to be **[disposed] received** at **[lined disposal] permitted** facilities if all of the following are met:

* * * * *

(ii) The waste **[has the same characteristics as municipal waste that does not contain hazardous waste]. is municipal-like residual waste and no changes in operation or management of the permitted facility are required to accept the waste.**

(iii) The applicant has demonstrated to the Department's satisfaction that no additional analysis is necessary to determine if the waste can be **[disposed of] received** at the facility without adversely affecting the effectiveness of the liner or leachate treatment systems.

* * * * *

§ 287.133. Source reduction strategy.

An application for the processing or disposal of residual waste shall contain a copy of the source reduction strategy required by § 287.53 (relating to source reduction strategy) for each residual waste to be **[disposed of or processed] received** at the facility.

§ 287.134. Waste analysis plan.

(a) The application shall include a waste analysis plan for each type of waste proposed to be **[disposed] received** at the **permitted** facility. The plan shall take into account the waste analysis required by § 287.132 (relating to chemical analysis of waste). At a minimum, the plan shall include:

* * * * *

(b) The application shall also include a plan for screening and managing incoming waste to ensure that the disposal or processing of the waste is consistent with the permit and this **[chapter] article**. Except as otherwise required by the Department, the application shall include, at a minimum, a plan for checking each load of waste received at the facility for color, physical state and phases of waste.

* * * * *

FEES

§ 287.141. Permit application fee.

(a) Each application for a new permit and each application for permit modification under § 287.115 (relating to filing by permitted facilities) shall be accompanied by a nonrefundable fee in the form of a check payable to the "Commonwealth of Pennsylvania" for the following amount:

(1) **[Fifteen] Twenty-five** thousand **[six] nine** hundred dollars for residual waste landfills.

(2) **[Ten] Eight** thousand **[nine] five** hundred dollars for residual waste disposal impoundments.

(3) **[One] Five** thousand **[seven] one** hundred dollars for the agricultural utilization of residual waste.

(4) Five thousand **[four] one** hundred dollars for the utilization of residual waste for land reclamation **[or surface land disposal]**.

(5) **[Two] Five** thousand **two hundred** dollars for residual waste transfer facilities.

(6) For residual waste processing facilities other than transfer facilities:

(i) **[Six] Eight** thousand **[six] three** hundred dollars for noncaptive residual waste incinerators.

(ii) **[One] Two** thousand **[six] two** hundred dollars for captive residual waste incinerators.

(iii) **[Three] Five** thousand **[three] two** hundred dollars for other residual waste processing facilities.

(7) **[Fourteen] Eight** thousand **five hundred** dollars for demonstration facilities.

(b) Each application for a permit modification under § 287.154 (relating to public notice and public hearings for permit modifications) shall be accompanied by a nonrefundable fee in the form of a check payable to the "Commonwealth of Pennsylvania" for the following amount:

(1) **[Eight] Six** hundred dollars for the addition of types of waste not approved in the permit.

(2) **[Six] Seven** thousand **[three] eight** hundred dollars for residual waste landfills.

(3) **[Five] Six** hundred dollars for the agricultural utilization of residual waste.

(4) One thousand **[six] nine** hundred dollars for the utilization of residual waste for land reclamation or surface land disposal.

(5) **[Three] Four** thousand six hundred dollars for residual waste disposal impoundments.

(6) For residual waste processing facilities:

(i) One thousand **[two] five** hundred dollars for incinerators.

(ii) **[Six] Seven** hundred dollars for other residual waste processing facilities.

(7) Five thousand **[four] eight** hundred dollars for demonstration facilities.

(8) **[Two] Three** hundred **[fifty]** dollars for a minor permit modification.

* * * * *

PUBLIC NOTICE AND COMMENTS

§ 287.151. Public notice by applicant.

(a) An applicant for a new permit, major permit modification, permit renewal, permit reissuance and a person or municipality submitting a closure plan shall publish once a week for 3 consecutive weeks a notice in a newspaper of general circulation in the area where the facility or proposed facility is located. The notice shall meet the following requirements:

(1) The notice shall include a brief description of the location and proposed operation or closure of the facility, and shall indicate where copies of the application or closure plan will be filed. **If groundwater degradation exists at closure or occurs after closure, the notice shall include a list of contaminants, abatement measures taken prior to closure, if applicable, proposed remediation measures and proposed remediation standards to be met. If the permittee proposes to utilize the site-specific standard, the notice shall include a 30-day public and municipal comment period during which the municipality can request to be involved in the development of the remediation and reuse plans for the site.**

* * * * *

(d) An applicant for a new permit, permit reissuance, permit renewal or major permit modification, and a person or municipality submitting a closure plan shall, immediately before the application or plan is filed with the Department, give written notice to each municipality in which the site or proposed permit area is located. **If groundwater degradation exists at closure or occurs after closure, the notice shall include a list of contaminants, abatement measures taken prior to closure, if applicable, proposed remediation mea-**

sures and proposed remediation standards to be met. If the permittee proposes to utilize the site-specific standard, the notice shall include a 30-day public and municipal comment period during which the municipality can request to be involved in the development of the remediation and reuse plans for the site. The notice shall state if the applicant proposes a design alternative under § 287.231, and shall briefly describe the alternative design. The applicant shall file with the Department a copy of the notice as part of the application or plan. The Department will not issue a permit for 60 days from the date of this notice unless each municipality to which this notice is sent submits a written statement to the Department expressly waiving the 60-day period.

* * * * *

§ 287.152. Public notice by Department.

(a) The Department will publish a notice in the *Pennsylvania Bulletin* of the following:

* * * * *

(2) Receipt of a closure plan **and if groundwater degradation exists at closure or occurs after closure, the notice shall include a list of contaminants, abatement measures taken prior to closure, if applicable, proposed remediation measures and proposed remediation standards to be met. If the permittee proposes to utilize the site-specific standard, the notice shall include a 30-day public and municipal comment period during which the municipality can request to be involved in the development of the remediation and reuse plans for the site.**

* * * * *

(b) The Department will submit a copy of each application for a new permit, permit reissuance, permit renewal or major permit modification, and each closure plan to the host municipality and the appropriate county, county planning agency and county health department, if one exists. **If groundwater degradation exists at closure or occurs after closure, the Department will include a copy of the applicant's list of contaminants, identification of abatement measures taken prior to closure, if applicable, proposed remediation measures and proposed remediation standards to be met**. For new or expanded residual waste landfills or residual waste disposal impoundments for which the Phase I and Phase II applications are submitted separately, copies of the Phase I and Phase II applications will be submitted.

* * * * *

§ 287.154. Public notice and public hearings for permit modifications.

(a) An application for a permit modification for a residual waste landfill or residual waste disposal impoundment shall be considered an application for a major permit modification under §§ 287.151—287.153 (relating to public notice by applicant; public notice by Department; and public comments) if the application involves one or more of the following:

* * * * *

(2) A change in **the average or maximum** daily waste volume.

(3) A change in excavation contours or final contours, including final elevations and slopes, **if the change results in increased disposal or storage capacity or impacts groundwater isolation distances or groundwater quality**.

* * * * *

(5) A change in the approved groundwater monitoring plan, except for the addition **or replacement** of wells or parameters, or a change in the groundwater monitoring plan for a facility permitted prior to the effective date of these regulations to comply with the requirements of this article.

(6) A change in approved leachate collection and treatment **[plan] method**.

(7) A change in gas monitoring or management plan, or both, **except where installation of additional wells or improvements to the collection systems are proposed**.

[(8) A change in the approved type, amount, origin or application of daily, intermediate and final cover materials. A change in origin of cover materials will not, however, be considered an application for a major permit modification if the origin of the cover materials in the existing permit is an offsite borrow area.

(9)] (8) ***

[(10)] (9) ***

[(11)] (10) A change in approved design under § 287.231 (relating to equivalency review procedure) **if the design has not been previously approved through an equivalency review**.

(11) The submission of an abatement plan.

(b) An application for a permit modification for a residual waste processing facility shall be considered an application for a major permit modification under §§ 287.151—287.153 if the application involves one or more of the following:

(1) A change in specifications or dimensions of waste storage or residue storage areas **if the change results in an increase in processing or storage capacity**.

(2) A change in the approved groundwater monitoring plan, except for the addition **or replacement** of wells or parameters.

(3) A change in an approved closure plan **[, if applicable]**.

* * * * *

(6) A change in approved design under § 287.231 **if the design has not been previously approved through an equivalency review**.

* * * * *

Subchapter D. PERMIT REVIEW PROCEDURES AND STANDARDS

PERMIT REVIEW

§ 287.202. Completeness review.

(a) After receipt of a permit application, the Department will determine whether the application is administratively complete. For purposes of this section, an application is administratively complete if it contains the necessary information, maps, fees and other documents, regardless of whether the information, maps, fees and documents would be sufficient for issuance of the permit. **If the Phase I and Phase II parts of the application**

for a landfill are submitted separately, the application will not be considered to be administratively complete until both parts are determined to be administratively complete.

* * * * *

GENERAL PERMIT RESTRICTIONS

§ 287.211. Term of permits.

* * * * *

(c) Residual waste may not be disposed **[or],** processed **[at a facility] or beneficially used under a permit** after the expiration of **[its] the** permit term **for disposal, processing or beneficial use**. Expiration of the permit term does not limit the operator's responsibility for complying with **closure and postclosure** requirements **and all other requirements** under the act, the environmental protection acts, the regulations promulgated thereunder**[,]** or the terms or conditions of its permit.

* * * * *

(e) If no residual waste is processed or disposed **[at a facility] under a permit** within 5 years of the date of issuance by the Department of a permit for the facility, the permit is void.

§ 287.212. Conditions of permits—general and right of entry.

Each permit issued by the Department will ensure and contain the following conditions:

* * * * *

(4) The permittee shall notify the Department within the time stated in the permit and if no time is stated not later than 45 days, on a form prepared by the Department, after the transfer has occurred of a controlling interest in the permittee. The notification shall contain the same information about the person who obtained the controlling interest in the permittee as is required of a permit applicant under §§ 287.124 and 287.125 (relating to identification of interests; and compliance information). A "controlling interest" means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract or otherwise.

PERMIT REISSUANCE, MODIFICATION AND RENEWAL

§ 287.221. Permit reissuance.

(a) A transfer, assignment or sale of rights granted under a permit may not be made **[except as provided in this section] without obtaining permit reissuance**.

* * * * *

§ 287.222. Permit modification.

* * * * *

(c) The Department may approve, onsite, a minor permit modification for the construction of liner systems or of erosion and sedimentation control devices if it is impracticable to comply with subsections (a) and (b) and if the modification will improve the permitted design.

OTHER PERMITTING PROVISIONS

§ 287.231. Equivalency review procedure.

* * * * *

(e) **[For a specific section in this article that expressly allows approval of an alternative design under this section, the Department may publish in the *Pennsylvania Bulletin* a notice and findings that a particular design not identified in the section represents best available demonstrated technology for accomplishing the performance standards in the section.**

(1) The Department will not publish such a notice until after it has approved the particular design at least once under this section.

(2) After publication of the notice, a permit applicant may propose, and the Department may approve, the design contained in the notice without use of the procedure in this section.] If an alternative design is approved through a major permit modification, the Department may approve the applicability of the alternative design to another applicant through a minor permit modification.

Subchapter E. BONDING AND INSURANCE REQUIREMENTS

BOND RELEASE

§ 287.341. Release of bonds.

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(g) The following apply with regard to bond release:

(1) The Department will not release a bond amount deposited for a facility if the release would reduce the total remaining amount of bond to an amount which would be insufficient for the Department to complete closure and postclosure care**, including long-term maintenance of remediation measures,** and to take measures that may be necessary to prevent adverse effects upon the environment or public health, safety or welfare under the act, the environmental protection acts, this title, the terms and conditions of the permits and orders of the Department.

(2) The release of a bond by the Department does not constitute a waiver or release of other liability provided in law, nor does it abridge or alter rights of action or remedies of a person or municipality now or hereafter existing in equity or under criminal and civil common law or statutory law. The release of a bond does not discharge an owner or operator from liability to restore the groundwater to **[background conditions] remediation standards and to maintain groundwater quality, at a minimum, at those levels.**

* * * * *

[(4) For facilities which have not achieved background levels for groundwater at final closure certification, the Department may make a determination that additional remediation has become technologically feasible during the 10-year period following final closure certification. If a determination is made, the Department may require the application of the newly developed technology at the site provided the new technology will not cause more environmental harm than the contaminants. When determining whether the new technology should be applied, the Department will consider whether the financial burden of additional

remediation so outweighs the environmental benefit that it would be unreasonable to require it at the time of evaluation. If the new technology required by the Department is not applied by the operator or if the technology is not applied in accordance with manufacturer's instructions and reasonable standards of the profession the bond will not be released.]

§ 287.342. Final closure certification.

* * * * *

(b) The final closure certification request shall be accompanied by a nonrefundable administration fee in the form of a check payable to the "Commonwealth of Pennsylvania" for the following amount:

(1) **[Seven] Eight** thousand **[one] eight** hundred dollars for residual waste landfills and residual waste disposal impoundments.

(2) **[Four] Six** hundred **[and fifty]** dollars for all other residual waste processing or disposal facilities.

(c) **[Except as provided in subsection (d),]** The Department will not issue a final closure certification unless the operator demonstrates that:

* * * * *

(2) One of the following remediation standards is met and maintained at the identified compliance points:

(i) The Statewide health standard at and beyond the property boundary.

(ii) The background standard at each well selected to determine the extent of contamination, as identified in § 288.256(c)(1) or § 289.266(c)(1) (relating to groundwater assessment plan).

(iii) The site-specific standard at and beyond the property boundary.

[(2)] (3) ***

[(3)] (4) ***

(d) **[The Department may issue a final closure certification, although groundwater monitoring indicates that there is groundwater degradation at the facility, if the facility otherwise complies with subsection (c), and the operator demonstrates, to the Department's satisfaction, that the following conditions have been met:**

(1) It is impossible or infeasible to restore the groundwater quality to background levels using the technology that is available at the time of the request for final closure certification.

(2) The operator's groundwater remediation activities have restored the groundwater quality to levels as close to background as possible, using the most effective feasible technology that is available at the time of the request for final closure certification.

(3) For facilities that are not permitted as of July 4, 1992, and for facilities permitted after July 4, 1992, the groundwater remediation for the facility has achieved at least human health and environmental protection levels.

(4) For facilities permitted prior to July 4, 1992, including facility expansions, the groundwater remediation for the facility has achieved levels that are at least equivalent to the groundwater parameters.]

For measuring compliance with secondary contaminants, under subsection (c)(2)(i) or (iii), the Department may approve a compliance point beyond the property boundary up to a water source.

* * * * *

(g) The final closure certification will not be construed as a guarantee of future performance nor will it constitute a waiver or release of bond liability or other liability existing in law or equity for adverse environmental effects or conditions of noncompliance at the time of the certification or at a future time, for which the operator shall remain expressly liable. The issuance of a final closure certification does not discharge an owner or operator from liability to restore the groundwater to **[background conditions] remediation standards and maintain groundwater quality, at a minimum, at those levels.**

* * * * *

(i) If after the issuance of a certification of final closure the Department determines that the level of risk is increased beyond the acceptable range at a facility due to substantial changes in exposure conditions, such as in a change in land use from a nonresidential to a residential use, or new information is obtained about a substance associated with the facility which revises exposure assumptions beyond the acceptable range, additional remediation shall be required.

PUBLIC LIABILITY INSURANCE REQUIREMENTS

§ 287.371. Insurance requirement.

(a) A person or municipality that has not submitted proof of insurance under the act may not dispose or process residual waste unless the person or municipality has submitted proof of a commercial policy of liability insurance covering third-party claims for property damage and bodily injury as provided by this section **[by August 3, 1992]**.

* * * * *

Subchapter F. CIVIL PENALTIES AND ENFORCEMENT

ENFORCEMENT

§ 287.421. Administrative inspections.

* * * * *

(b) The Department, its employes and agents may conduct routine inspections as follows:

(1) For residual waste landfills **[,] and** residual waste disposal impoundments **[and facilities for the land disposal of residual waste]**, at least 12 times per year.

* * * * *

(5) For facilities **and beneficial use areas** subject to permit by rule under § 287.102 (relating to **[permit-by-rule] permit by rule**), general permit for beneficial use or processing, or both, under §§ 287.611, 287.612, 287.621—287.625, 287.631, 287.632, 287.641—287.644, 287.651 and 287.652 and beneficial use areas under §§ 287.661—287.665, at least once per year.

* * * * *

Subchapter G. DEMONSTRATION FACILITIES

§ 287.501. Scope.

This subchapter applies to applications for residual waste processing or disposal facilities or parts of facilities, that are based on a new or unique technology for processing or disposing of residual waste. For purposes of this subchapter, a technology is new or unique if it has not previously been demonstrated in this Commonwealth or another comparable area. **The Department may approve in writing, as a permit modification, the demonstration of new or unique technology for the processing or disposal of residual waste at permitted residual waste processing or disposal facilities provided the requirements of this subchapter are met.**

§ 287.502. Relationship to other requirements.

[This chapter does not create exceptions to, or authorize the Department to grant variances from, other provisions of this article.]

(a) An operation that is approved under this subchapter is subject to this article.

(b) The Department may waive or modify any application and operating requirements in this article. The Department will not waive or modify Subchapter A, §§ 287.124, 287.125 and 287.128, Subchapter E or Subchapter F.

§ 287.504. Operating requirements.

In addition to applicable operating requirements set forth in this article, each person or municipality that operates a demonstration facility shall comply with the following:

(1) **[The facility may not exceed 1 acre in size, unless the applicant demonstrates, and the Department finds, that a larger area is needed to adequately test the technology. In that case, the]** The facility may not be larger than the area needed to adequately test the new or unique technology.

* * * * *

(6) If Chapter 288, 289, 291, 293, 295, 297 or 299 is not clearly applicable to the facility, the permittee shall annually submit to the Department a nonrefundable **[annual]** permit administration fee of an amount set forth in the approved permit, but not more than $1,800, in the form of a check payable to the "Commonwealth of Pennsylvania." The fee will be based on the administrative costs of the Department under section 104 of the act (35 P. S. § 6018.104(8)).

Subchapter H. BENEFICIAL USE

GENERAL PERMITS FOR PROCESSING OR BENEFICIAL USE, OR BOTH, OF RESIDUAL WASTE OTHER THAN CERTAIN USES OF COAL ASH—AUTHORIZATION AND LIMITATIONS

§ 287.611. Authorization for general permit.

* * * * *

(e) The Department will not issue a general permit for the following:

* * * * *

(7) The use of residual waste for construction or operations at a disposal facility.

* * * * *

(g) The Department may issue a general permit on a regional or Statewide basis for the use, as construction material, of soil and other materials that do not meet the clean fill criteria.

BENEFICIAL USE OF COAL ASH

§ 287.661. Use of coal ash as structural fill.

* * * * *

(e) Coal ash used as a structural fill will not be considered a beneficial use unless the following requirements are met:

* * * * *

(3) The slope of a structural fill may not be greater than 2.5 horizontal to 1.0 vertical. **The Department may approve a greater slope based on a demonstration of structural stability**.

* * * * *

(8) Coal ash may not be placed **[within 4 feet of] in contact with** the seasonal high water table.

(9) Coal ash may not be placed within 8 feet of the **[permanent] regional** groundwater table.

* * * * *

(f) Structural fills may not be located:

* * * * *

(2) Within 300 feet of a **[groundwater] water** source **unless the operator obtains a waiver from the water source's owner, allowing for another distance**.

[(3) Within 500 feet upgradient of a surface water source.

(4)] (3) ***

[(5)] (4) ***

[(6)] (5) ***

[(7) In or within 300 feet of an exceptional value wetland.

(8) Within] (6) In or within 100 feet of a wetland **[, other than an exceptional value wetland]**.

§ 287.662. Use of coal ash as a soil substitute or soil additive.

* * * * *

[(f)] (e) ***

* * * * *

CHAPTER 288. RESIDUAL WASTE LANDFILLS

Subchapter B. APPLICATION REQUIREMENTS

PHASE I APPLICATION REQUIREMENTS—GENERAL

§ 288.112. Facility plan.

An application to operate a residual waste landfill shall contain conceptual drawings and a narrative describing the following:

* * * * *

(2) **[The quantity, quality and availability of acceptable cover material and liner system construction material, both on and off the proposed permit area] A detailed description of the volume of soil needed to construct and operate the facility.**

§ 288.113. Maps and related information.

(a) An application shall contain a topographic map, on a scale of 1 inch equals no more than 200 feet with 10-foot maximum contour intervals. The Department may, in writing, approve the use of a different horizontal scale **[for facilities larger than 250 acres]**. The application shall include the map and necessary narrative descriptions, which show the following:

* * * * *

[(c) An application shall also contain a United States Department of Agriculture Soil Conservation Service soil map, or aerial photographs when current soils maps are unavailable, for the proposed permit area and adjacent area showing the site boundaries, soil types and the location of test pits or excavations taken under § 288.124.]

PHASE I APPLICATION REQUIREMENTS—SITE ANALYSIS

§ 288.122. Geology and groundwater description.

(a) An application shall contain a description of the geology and groundwater in the proposed permit area and adjacent area down to and including the lowest aquifer that may be affected by the facility, including the following:

* * * * *

(8) Well head protection areas in accordance with § 109.1 (relating to definitions) that may be impacted by the facility.

(9) A groundwater contour map based upon the highest groundwater level recorded monthly in each boring for the previous year.

* * * * *

§ 288.124. Soil description.

(a) An application **for a Class I or Class II landfill** shall contain:

(1) **[A description of the soils within the proposed permit area and adjacent area down to the bedrock, including for each soil horizon, depth, matrix color, texture, structure, consistency, degree of mottling, mottling colors and laboratory particle size analyses] The depth to the seasonal high water table within the proposed permit area and adjacent area to demonstrate that the seasonal high water table will not be in contact with the liner system.**

(2) A description of the soils to be used for daily, intermediate and final cover, **[attenuating soil base, liner system]** and facility construction, including **[for each onsite and offsite borrow area] chemical description**, texture, laboratory particle size analyses**[,] and** quantity **[and cross section]**. **Cross sections** of the borrow pits within the proposed permit area **shall be included.**

(b) An application for a Class III landfill shall contain:

(1) A description of the soils within the proposed permit area and adjacent area down to the bedrock, including for each soil horizon, depth, matrix color, texture, structure, consistency, degree of mottling, mottling colors and laboratory particle size analyses.

(2) The depth to the seasonal high water table within the proposed permit area and adjacent area to demonstrate that the seasonal high water table will not be in contact with the liner system.

(3) A description of the soils to be used for daily, intermediate and final cover, attenuating soil base and facility construction, including texture, chemical description, laboratory particle size analyses and quantity. Cross sections of the borrow pits within the proposed permit area shall be included.

[(b)] (c) ***

* * * * *

§ 288.127. Mineral deposits information.

* * * * *

(b) If the proposed permit area and adjacent area **[overlies] overlie** recoverable or mineable **[coals] mineral deposits**, the applicant shall demonstrate that the applicant owns the **[coal] mineral deposits** and shall warrant that the **[coal] minerals** will not be mined as long as residual waste remains on the site. **This requirement does not apply to the expansion of captive facilities permitted prior to July 4, 1992.**

§ 288.128. Notification of proximity to airport.

An applicant shall notify the Federal Aviation Administration, the Department and the airport if a proposed landfill or lateral expansion, that plans to receive putrescible waste, is within a 5-mile radius of an airport runway end used by turbojet or piston-type aircraft.

PHASE II APPLICATION REQUIREMENTS—GENERAL

§ 288.132. Operation plan.

An application shall contain a description of the residual waste landfill operations proposed during the life of the facility within the proposed permit area, including the following:

(1) A narrative describing the type and method of residual waste landfill procedures, **inspection and monitoring of incoming waste,** sequence of landfilling activity, type of landfilling activity, proposed engineering techniques and the major equipment to be used under § 288.215 (relating to equipment), using the maps and grids required by § 288.133 (relating to map and grid requirements) as a basis for the description.

* * * * *

[(3) A narrative describing the type and size of equipment that is proposed to be used at the facility, as well as a description of the availability of standby equipment in the event of breakdown or maintenance.

(4) A narrative describing a plan for training facility operators and other personnel concerning the operation and approved design of the facility.

(5)] (3) ***

[(6)] (4) ***

[(7)] (5) ***

* * * * *

[(8)] (6) The proposed operating hours of the proposed facility. **The operating hours include those**

hours related to construction and other activities related to operation of the facility.

§ 288.134. Plan for access roads.

The application shall contain designs, cross sections and specifications for access roads, including load limits, under § 288.213 (relating to access roads). **Access roads shall be designed and constructed to adequately handle the truck traffic expected at the disposal facility.**

§ 288.136. Nuisance **minimization and** control plan.

(a) The application shall contain a plan in accordance with § 288.218 (relating to nuisance **minimization and** control) to **[prevent] minimize** and control hazards or nuisances from vectors, odors, noise, dust and other nuisances not otherwise provided for in the permit application. **[The plan shall provide for the routine assessment of vector infestation and shall also provide for countermeasures. The plan may include a control program involving a contractual arrangement for services with an exterminator.]**

(b) The plan shall include the following:

(1) Provisions for the routine assessment and control of vector infestation.

(2) Methods to minimize and control nuisances from odors, dustfall and noise off the property boundary from the facility.

(3) For odors, the determination of normal and adverse weather conditions based on site-specific meteorological data. Prior to the installation of equipment and collection of meteorological data, a protocol for the installation and data collection shall be approved by the Department.

(c) The plan required in subsection (a) may include a contractual arrangement for services of an exterminator or an air quality, noise, dust control or other professional.

§ 288.138. Daily volume.

The application shall contain proposed average and maximum daily volumes for the facility, and a detailed justification for these volumes, based on §§ 287.126 and 287.127 (relating to requirements for environmental assessment; and environmental assessment).

PHASE II APPLICATION REQUIREMENTS—COVER AND REVEGETATION

§ 288.141. Compaction and cover plan.

An application shall contain a plan for compaction and cover at the proposed facility under §§ 288.216 and **[288.231] 288.232**—288.234 and shall include the following information:

* * * * *

(3) The **materials and** procedures for application of daily, intermediate and final cover material, **that meet the standards in §§ 288.232—288.234 (relating to daily cover; intermediate cover and slopes; and final cover and grading).**

* * * * *

[(5) If cover material will be obtained from an offsite area not owned by the applicant, copies of contracts or other binding agreements showing that the applicant is authorized to obtain cover material from the offsite area for the term of the permit.]

PHASE II APPLICATION REQUIREMENTS—WATER QUALITY PROTECTION AND MONITORING

§ 288.152. Water quality monitoring plan.

(a) An application shall contain a water quality monitoring plan showing how the operator intends to comply with §§ 288.251—288.258 (relating to water quality monitoring). The plan shall include the following:

* * * * *

(2) For new facilities, pre-operational data showing existing groundwater quality, as required by § 288.123 (relating to groundwater quality description), and a procedure to establish **[background water] this groundwater** quality. For existing facilities, adequate monitoring data as required by § 288.123 to characterize **background** groundwater quality and a procedure to establish **[background water] this groundwater** quality.

(b) The application shall contain a groundwater sampling and analysis plan. The plan shall include:

* * * * *

(4) Procedures and techniques for evaluation of analytical results to determine if groundwater degradation **[, exceedances of mandatory abatement trigger levels or adverse effects on groundwater have] has** occurred.

[(5) Proposed mandatory abatement trigger levels for each monitoring well for each contaminant for which monitoring is required under §§ 288.251—288.258.

(i) For facilities other than monofills which are permitted after July 4, 1992, including the expansion of facilities that are operating or permitted on or before July 4, 1992, the proposed mandatory abatement trigger level for a contaminant at a monitoring point shall be equivalent to the background levels for the contaminant.

(ii) For monofills which are permitted after July 4, 1992, including the expansion of facilities that are operating or permitted on or before July 4, 1992, the proposed mandatory abatement trigger level shall be the maximum level of degradation that will be predicted, through modeling, to exist at the monitoring point for that contaminant based on the design, construction, and operation of the facility. The application shall also include a demonstration of the validity and accuracy of the model at the proposed facility. A mandatory abatement trigger level may not exceed a groundwater parameter for a contaminant at a monitoring point, or background levels for the contaminant at the property boundary. If the background level for a contaminant is higher than the groundwater parameter for a contaminant, the proposed mandatory abatement trigger level shall not exceed the background level for a contaminant at a monitoring point.

(iii) For facilities that are operating or permitted on or before July 4, 1992, the proposed mandatory abatement trigger level for a contaminant at a monitoring point shall be equivalent to the groundwater parameter for the contaminant, and shall be equivalent to background levels for the contami-

nant at the property boundary. If the background level for a contaminant is higher than the groundwater parameter for the contaminant, the proposed mandatory abatement trigger level for these facilities shall be the background level for the contaminant at a monitoring point.]

* * * * *

[(d) Once an application is determined to be administratively complete under § 287.202 (relating to completeness review), the applicant is not required to amend the application because a groundwater parameter has changed due to a change in data from the EPA's IRIS.

(e) The Department may approve a change in the groundwater parameter which is based on IRIS for a contaminant, if the applicant makes a clear and convincing demonstration to the Department that new studies not yet considered by the EPA in IRIS more accurately reflect the human health and environmental effects of a contaminant than IRIS.]

PHASE II APPLICATION REQUIREMENTS—CLOSURE PROVISIONS

§ 288.182. Closure plan.

(a) The application shall contain a plan describing the activities that are proposed to occur **[during the postclosure period] toward and after closure** to ensure compliance with this chapter.

(b) The closure plan shall include:

* * * * *

[(3) If the facility will close in stages, a description of how and when the facility will begin and implement partial closure.

(4)] (3) ***

[(5)] (4) A narrative description, including a schedule, of measures that are proposed to be carried out **toward and** after closure at the facility, including measures relating to the following:

* * * * *

(vi) Access control, **including maintenance of access control**.

[(6)] (5) ***

[(7)] (6) ***

Subchapter C. OPERATING REQUIREMENTS

GENERAL PROVISIONS

§ 288.201. Basic limitations.

* * * * *

(f) All approved mitigation measures identified in the application shall be completed before a facility may accept waste unless otherwise authorized in writing by the Department for technical reasons.

§ 288.202. Certification.

(a) The operator shall submit a certification by a Pennsylvania registered professional engineer on forms provided by the Department upon completion of each major construction activity identified in the permit for each phase or sequence of construction at the facility. Major construction activities include the following:

* * * * *

(12) Construction of the landfill gas extraction system.

* * * * *

DAILY OPERATIONS

§ 288.211. Signs and markers.

* * * * *

(d) A person or municipality that operates a noncaptive residual waste landfill shall identify the facility for the duration of operations by posting and maintaining a sign which is clearly visible **and can be easily seen and read** at the junction of each access road and public road. The sign shall be constructed of a durable, weather-resistant material **[and shall be of a minimum size of 3 feet by 4 feet with a light background and contrasting letters and numbers of a minimum height of 3 inches that can be easily seen and read. The sign shall show the name, business address and telephone number of the person or municipality that operates the facility, the operating hours of the facility and the number of the current permit authorizing operation of the facility.]**

§ 288.213. Access roads.

* * * * *

(e) Except for local captive facilities where the Department has set forth alternate requirements in the permit, **and except for roads not leading to the disposal area**, the landfill shall maintain a minimum cartway width of one of the following:

* * * * *

(f) An access road negotiable by loaded collection vehicles shall be provided from the entrance gate of the facility to each unloading area**[,]. An access road shall also be provided to each** treatment facility **[or],** impoundment **[located on the site. An access road shall also be provided to] and** groundwater monitoring **[points] point**. Other monitoring points shall be readily accessible.

[(g) An access road shall be constructed on a dry and stable area.

(h) Prior to the construction of a road at a facility other than a local captive facility, topsoil shall be removed and shall meet one of the following conditions:

(1) Be immediately used as final cover.

(2) Be stored on a stable site and protected against erosion and compaction.

(i)] (g) ***

[(j)] (h) ***

[(k)] (i) ***

§ 288.214. Measurement **and inspection** of waste.

* * * * *

(c) The operator of a noncaptive facility shall inspect and monitor incoming waste to insure that the disposal of waste is consistent with this article, unless otherwise required by the Department. The monitoring and inspection shall include screening of waste for radioactive isotopes and be consistent with § 287.134 (relating to waste analysis plan).

§ 288.215. Equipment.

[(a)] ***

[(b) Standby equipment shall be located on the site or at a place where it can be available within 24 hours.] If a breakdown of the operator's equipment occurs, the operator shall utilize standby equipment as necessary to comply with the act, the environmental protection acts, this subchapter and permit conditions.

§ 288.216. Unloading and compaction.

(a) Solid waste shall be spread and compacted in **[layers not to exceed 2 feet in depth, unless an alternative depth is approved by the Department as part of the permit] accordance with § 288.141 (relating to compaction and cover plan).**

* * * * *

§ 288.217. Air resources protection.

(a) The operator shall implement fugitive air **[containment] contaminant** control measures and otherwise prevent and control air pollution **[under] in accordance with** the Air Pollution Control Act (35 P. S. §§ 4001—**[4014) and Subpart C,] 4015)**; Article III (relating to air resources) **and § 288.218 (relating to nuisance minimization and control). Minimization and control measures shall include the following**:

[(b) The operator may] (1) Ensuring that operation of the facility will not cause or contribute to an exceedance of an ambient air quality standard under § 131.3 (relating to ambient air quality standards).

[(c) A person or municipality may not cause or allow] (2) Ensuring that no open burning **occurs** at the facility.

(3) Minimizing the generation of fugitive dust emissions from the facility.

(b) The operator shall comply with the terms and conditions of an air quality plan approval and air quality operating permit issued to the facility.

§ 288.218. Nuisance **minimization and** control.

(a) **[The]** ***Vectors.*** **An** operator may not cause or allow the attraction, harborage or breeding of vectors.

(b) **[The]** ***Other conditions.*** **An** operator shall **[also prevent and eliminate] minimize and control other** conditions **[not otherwise prohibited by this subchapter]** that are harmful to the environment or public health, or which create safety hazards, odors, dust, noise, unsightliness and other public nuisances.

(c) ***Odors.***

(1) An operator shall implement the plan approved under § 288.136 (relating to nuisance minimization and control plan) to minimize and control nuisances from odors. If the Department determines during operation of the facility that the plan is inadequate to minimize or control nuisance, the Department may modify the plan or require the operator to modify the plan and obtain Department approval.

(2) An operator shall perform regular, frequent and comprehensive site inspections to evaluate the effectiveness of cover, capping, gas collection and destruction, waste acceptance and all other waste management practices in reducing the potential for offsite odor creation.

(3) An operator shall promptly address and correct problems and deficiencies discovered in the course of inspections performed under paragraph (2).

§ 288.221. Daily volume

(a) A person or municipality operating a residual waste landfill may not receive solid waste at the landfill in excess of the maximum or average daily volume approved in the permit.

(b) The average daily volume is a limit on the volume of solid waste that is permitted to be received at the facility, and shall be computed annually by averaging the total volume received over the year.

COVER AND REVEGETATION

§ 288.231. **[Topsoil storage] (Reserved).**

[(a) Unless topsoil is not needed for final cover under § 288.234 (relating to final cover and grading) or is unsuitable for final cover the following apply:

(1) Topsoil shall be removed in a separate layer prior to preparation of an area for disposal or other surface disturbances.

(2) If topsoil is less than 12 inches, a 12-inch layer which includes the topsoil and the unconsolidated materials immediately below the topsoil shall be removed, segregated, conserved and replaced as the upper layer of final cover.

(3) If topsoil or other materials removed under this subsection are not promptly redistributed as cover, they shall be stockpiled, temporarily vegetated and otherwise protected from wind and water erosion, unnecessary compaction and contaminants which lessen the capability of materials to support vegetation when redistributed on the site.

(b) Topsoil and other material removed under this section may not be removed from the site.]

§ 288.232. Daily cover.

* * * * *

(c) The composition of the daily cover material shall meet the following performance standards. The daily cover shall:

* * * * *

(4) Be **[noncombustible] capable of controlling fires.**

(5) Be consistent with the waste acceptance plan for the facility.

[(d) Unless alternative design requirements to meet the performance standards in subsection (c) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), daily cover shall meet the following design requirements:

(1) The cover shall fall within the United States Department of Agriculture textural classes of sandy loam, loam, sandy clay loam, silty clay loam, loamy sand and silt loam, as defined in the Soil Survey Manual published by the United States Department

of Agriculture, Soil Conservation Service (available from the Department of the Northeast National Technical Center of the Soil Conservation Service, 160 E. 7th Street, Chester, Pennsylvania 19013-6092).

(2) At least 40% by weight of the cover soil shall be capable of passing through a 2 millimeter, No. 10 mesh sieve.

(3) The combustible or coal content of the cover may not exceed 12% by weight.

(4) The cover may not include rock fragments that are greater than 6 inches in diameter.

(5) The layer of cover soil shall be a minimum of 6 inches in thickness.

(6) The layer of cover soil shall be compacted.

(e)] **(d)** ***

§ 288.233. Intermediate cover and slopes.

* * * * *

(b) The Department may waive the intermediate cover requirements of this section if the operator demonstrates that the composition of solid waste disposed at the facility prevents vectors, odors, blowing litter**, erosion** and other nuisances, is noncombustible, allows loaded vehicles to successfully maneuver over it after placement without change in its properties and without regard to weather, and is capable of supporting the germination and propagation of vegetative cover as required by §§ 288.236 and 288.237 (relating to revegetation; and standards for successful revegetation).

(c) The composition of the intermediate cover material shall meet the following performance standards. The intermediate cover shall:

* * * * *

(4) Be **[noncombustible] capable of controlling fires.**

(5) **Be consistent with the waste acceptance plan for the facility.**

[Be capable of supporting] (6) **Support** the germination and propagation of vegetative cover as required by §§ 288.236 and 288.237 **unless vegetative cover is not necessary to control infiltration of precipitation and erosion and sedimentation.**

(7) Control infiltration of precipitation and erosion and sedimentation.

(d) Unless alternative design requirements to meet the performance standards in subsection (c) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), intermediate cover shall meet the following design requirements:

(1) **[The cover soil shall fall within the United States Department of Agriculture Textural Classes of sandy loam, loam, sandy clay loam, silty clay loam, loamy sand and silt loam as defined in the Soil Survey Manual published by the United States Department of Agriculture, Soil Conservation Service (available from the Department or the Northeast National Technical Center of the Soil Conservation Service, 160 E. 7th Street, Chester, Pennsylvania 19013-6092).**

(2) At least 40 by weight of the cover soil shall be capable of passing through a 2 millimeter, No. 10 mesh sieve.

(3) The combustible or coal content of the cover may not exceed 12% by weight.

(4) The cover may not include rocks that are greater than 6 inches in diameter.

(5) The] If soil or soil-like material is used, the layer of cover soil shall be at least 12 inches in thickness.

[(6) The] (2) If soil or soil-like material is used, the layer of cover soil shall be **[compacted] uniformly graded.**

[(e) A 5-day supply of cover material shall be maintained on the site.]

[(f) Areas on which] (e) If intermediate cover **[has been placed, and on which neither waste nor final cover is placed] requires revegetation, the revegetation shall be established** within 30 days **[thereafter, shall be temporarily revegetated and otherwise protected against erosion and sedimentation under § 288.236, and other applicable requirements].**

[(g) Intermediate slopes] (f) Slopes constructed during daily landfilling **and intermediate cover** activities may not exceed 50%. **[Intermediate slopes shall be covered, compacted with 1 foot of intermediate cover material and revegetated to control erosion.]**

§ 288.234. Final cover and grading.

(a) Except as provided in subsection (b), the operator shall provide final cover in the following manner:

(1) A cap **[consisting of a uniform and compacted 2-foot layer of clay]** shall be placed and graded over the entire surface of each final lift. **[The Department may approve, in the permit, synthetic material of the type and specifications set forth for primary liners in § 288.436 (relating to primary liner) and for caps in Appendix A, Table II (relating to minimum liner design standards) in lieu of the 2-foot layer of clay.]** The cap may be no more permeable than 1.0 x 10-7 cm/sec. **The following performance standards for the cap shall be met:**

(i) The cap shall limit the migration of precipitation into the landfill to the greatest degree that is technologically possible.

(ii) The cap shall be resistant to physical and chemical failure.

(iii) The cap shall cover all areas where waste is disposed.

* * * * *

(b) The Department may waive **[or modify]** the cap and drainage layer requirements of subsection (a)(1) and (2) based on a demonstration that it is not necessary to limit infiltration into the waste.

(c) **Unless alternative design requirements to meet the performance standards in subsection (a)(1) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the cap shall meet the design requirements set forth for caps in Appendix A, Table II (relating to liner design standards).**

[(c)](d) * * *

[(d)] (e) The layer of material described in subsection (a)(3) shall meet the following performance standards. The layer shall:

* * * * *

(4) Be **[noncombustible] Capable of controlling fires.**

* * * * *

(8) Be consistent with the waste acceptance plan.

[(e)] (f) Unless alternative design requirements to meet the performance standards in subsection **[(d)] (e)** are approved as part of the permit under § 287.231 (relating to equivalency review procedure) the layer of material described in subsection (a)(3) shall meet the following design requirements:

* * * * *

(3) **[The combustible or coal content of the cover may not exceed 12% by weight.**

(4)] The cover may not include rocks that are greater than 6 inches in diameter.

* * * * *

[(5)] (4) * * *

[(f)] (g) * * *

* * * * *

[(g)] (h) Unless the Department authorizes a different slope design in the permit based on a demonstration that the different design can meet the requirements of subsection **[(f)] (g),** slopes shall be designed, installed and maintained as follows:

* * * * *

WATER QUALITY PROTECTION

§ 288.245. Water supply replacement.

(a) A person or municipality operating a residual waste landfill which adversely affects a water supply **by degradation, pollution, or other means** shall restore the affected supply at no additional cost to the owner or replace the affected water supply with an alternate source that is of like quantity and quality to the original supply at no additional cost to the owner.

* * * * *

(d) Permanent water supplies include develo-[ment of a new well with distribution system, interconnection with a public water supply or extension of a private water supply, but do not include provision of bottled water or a water tank supplied by a bulk water hauling system, which are temporary water supplies.

WATER QUALITY MONITORING

§ 288.252. Number, location and depth of monitoring points.

* * * * *

(b) The upgradient and downgradient monitoring wells shall be:

* * * * *

(3) Located within 200 feet of the permitted disposal area, except as necessary to comply with subsection (c)**, and located at the points of compliance.**

* * * * *

[(e) Wells drilled under this section shall be drilled by drillers licensed under the Water Well Drillers License Act (32 P. S. §§ 645.1—645.13).

(f)] (e) * * *

§ 288.253. Standards for **wells and** casing of wells.

(a) A monitoring well shall be cased as follows:

* * * * *

(3) The well shall be constructed with a screen that meets the following requirements:

* * * * *

[(iv) The slot openings, design and screen diameter shall allow for effective well development.]

* * * * *

(5) The casing shall **be clearly visible and** protrude at least 1 foot aboveground, unless the Department has approved flush mount wells.

* * * * *

(7) **[If plastic casing is used, it shall be threaded to preclude potential sample contamination from solvent welded joints, unless otherwise provided by the Department in the permit] The casing shall be designed and constructed to prevent cross contamination between surface water and groundwater.**

(b) Monitoring well casings shall be enclosed in a protective casing that meets the following requirements. The well casing shall:

* * * * *

(5) Protrude **[at least 1 inch higher]** above **[grade than]** the monitoring well casing.

* * * * *

§ 288.256. Groundwater assessment plan.

(a) Submittals of plans shall be as follows:

[(1)] A person or municipality operating a residual waste landfill shall prepare and submit to the Department a groundwater assessment plan within **[30] 60** days after one of the following occurs:

[(i)] (1) * * *

[(ii)] (2) Laboratory **[analyses] analysis is** of one or more public or private water supplies indicates groundwater degradation that could reasonably be attributed to the facility.

[(2) For residual waste landfills permitted under the act or operating on July 4, 1992, and for which data triggering the submission of a plan under this section exist on July 4, 1992, the plan shall be submitted to the Department by January 4, 1993.]

* * * * *

(c) The groundwater assessment plan shall specify the manner in which the operator will determine the existence, quality, quantity, areal extent and depth of groundwater degradation and the rate and direction of migration of contaminants in the groundwater. A groundwater assessment plan shall be prepared by an expert in the field of hydrogeology. The plan shall contain the following information:

(1) The number, location, size, casing type and depth of wells, lysimeters, borings, pits, piezometers and other

assessment structures or devices to be used. **If the operator establishes compliance points as part of the assessment, the points shall be wells constructed in accordance with §§ 288.252 and 288.253 (relating to number, location and depth of monitoring points; and standards for wells and casing of wells).**

* * * * *

(5) Identification of the abatement standard that will be met.

* * * * *

§ 288.257. Abatement plan.

(a) The operator of a residual waste landfill shall prepare and submit to the Department an abatement plan whenever one of the following occurs:

(1) The groundwater assessment plan prepared and implemented under § 288.256 (relating to groundwater assessment plan) shows the presence of groundwater degradation for one or more contaminants at one or more monitoring points **[that exceeds the mandatory abatement trigger levels established by the Department in the permit for the contaminant at the monitoring point. If mandatory abatement trigger levels have not yet been established for the facility, the operator shall prepare and submit the abatement plan when the groundwater assessment plan shows either of the following:**

(i) The presence of groundwater degradation for one or more contaminants at one or more monitoring points that exceeds the groundwater parameter for those contaminants or, if background water quality exceeds the groundwater parameter degradation that exceeds background for those contaminants.

(ii) Groundwater degradation at the property boundary] and the analysis under § 288.256(c) indicates that an abatement standard under subsection (c) will not be met.

(2) Monitoring by the Department or operator shows the presence of **[groundwater degradation] an abatement standard exceedance** from one or more **[monitoring] compliance** points **[at a level that exceeds the mandatory abatement trigger level for the contaminant at the monitoring point] as indicated in subsection (c)** even if a groundwater assessment plan has not been completed. **[If mandatory abatement trigger levels have not yet been established by the Department in the permit for the facility, the mandatory abatement trigger level shall be groundwater degradation for one or more contaminants at one or more monitoring points that exceeds the groundwater parameter for those contaminants or groundwater degradation at the property boundary, based on monitoring by the Department or operator. If the background level for a contaminant is higher than the groundwater parameter for the contaminant, the mandatory abatement trigger level shall be the background level for the contaminant at the monitoring point.]** The operator is not required to implement an abatement plan under this paragraph if the following apply:

(i) Within 10 days after receipt of sample results showing an exceedance of **[the mandatory abatement trigger levels described in this paragraph] an abatement standard at a point of compliance described in subsection (c)**, the operator resamples the affected wells.

(ii) Analysis from resampling shows to the Department's satisfaction that **[the mandatory abatement trigger levels described in this paragraph have not been exceeded] an exceedance of an abatement standard has not occurred.**

[(b) In addition to subsection (a), the Department may require the operator of a residual waste landfill to prepare and submit to the Department an abatement plan whenever one of the following occurs:

(1) The groundwater assessment plan prepared and implemented under § 288.256 confirms the presence of groundwater degradation at one or more monitoring points.

(2) Monitoring by the Department or the operator shows the presence of groundwater degradation from one or more monitoring points, even if a groundwater assessment plan has not been completed.

(3) The Department has reason to believe that the operator is responsible for groundwater degradation.

(c)] (b) * * *

(c) If abatement is required in accordance with subsection (a), the operator shall demonstrate compliance with one or more of the following standards at the identified compliance points:

(1) For constituents for which Statewide health standards exist, the Statewide health standard for that constituent at and beyond 150 meters of the perimeter of the permitted disposal area or at and beyond the property boundary, whichever is closer.

(2) The background standard for constituents at and beyond 150 meters of the perimeter of the permitted disposal area or at and beyond the property boundary, whichever is closer.

(3) For constituents for which no primary MCLs under the Federal and State Safe Drinking Water Acts (42 U.S.C.A. §§ 300f—300j-18; and 35 P. S. §§ 721.1—721.17) exist, the risk-based standard at and beyond 150 meters of the perimeter of the permitted disposal area or at and beyond the property boundary, whichever is closer, if the following conditions are met:

(i) The risk assessment used to establish the standard assumes that human receptors exist at he property boundary.

(ii) The level is derived in a manner consistent with Department guidelines for assessing the health risks of environmental pollution.

(iii) The level is based on scientifically valid studies conducted in accordance with 40 CFR Part 792 (relating to good laboratory practice standards) promulgated under the Toxic Substances Control Act (15 U.S.C.A. §§ 2601—2692) or other scientifically valid studies approved by the Department.

(iv) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level of 1 × 10-5 at the property boundary.

(d) For measuring compliance with secondary contaminants under subsection (c), paragraph (1) or (3), the Department may approve a compliance point beyond 150 meters on land owned by the owner of the disposal area.

**[(d)] (e) * * *

[(e) The Department will consider the following factors in its review of the abatement plan:

(1) Whether the operator can restore the groundwater quality to background levels.

(2) Whether the operator has demonstrated that it is technologically impossible or infeasible to restore the groundwater quality to background levels.

(3) Whether the use of the chosen feasible technology will achieve remediation as close to background levels as possible.

(4) Whether the groundwater remediation for unpermitted facilities existing prior to the effective date of these regulations and for facilities permitted after the effective date of these regulations, including facility expansions, will achieve at least human health and environmental protection levels.

(5) Whether the groundwater remediation for facilities permitted prior to the effective date of these regulations will achieve levels that are at least equivalent to the groundwater parameters.

(6) Whether the methods or techniques proposed will cause more environmental harm than the contaminants.

(f) For facilities permitted prior to July 4, 1992, the Department may approve a change in the groundwater parameter which is based on IRIS for a contaminant if the operator makes a clear and convincing demonstration to the Department that new studies not yet considered by the EPA in IRIS more accurately reflect the human health and environmental effects of a contaminant than IRIS.

(g)] (f) * * *

[(h)] (g) * * *

[(i)] (h) * * *

* * * * *

MINERALS AND GAS

§ 288.261. Mineral resources.

(a) The operator shall isolate coal seams **[and],** coal outcrops **and coal refuse** from combustible waste deposits **[by barriers of natural and compacted soil that are at least 25 feet in thickness]** to prevent the combustion of the waste and that prevents damage to the liner system.

* * * * *

§ 288.262. Gas control and monitoring.

* * * * *

(e) Combustible gas levels may not equal or exceed:

* * * * *

[(3) Twenty-five percent of the lower explosive limit in any adjacent area, including buildings or structures on the adjacent area.]

* * * * *

EMERGENCY PROCEDURES

§ 288.271. Hazard prevention.

[(a)] A residual waste landfill shall be designed, constructed, maintained and operated to prevent and minimize the potential for fire, explosion or release of solid waste constituents to the air, water or soil of this Commonwealth that could threaten public health or safety, public welfare or the environment.

[(b) First aid facilities shall be available and job safety shall be practiced.]

§ 288.272. Emergency equipment.

(a) Except as provided in subsection (b), the operator shall have available, in proper working condition, the following equipment at the immediate operating area of the facility:

* * * * *

(3) Portable fire extinguishers, fire control equipment, spill control equipment, self contained breathing apparatus and decontamination equipment. **For fire control equipment requiring water, the facility shall have a water supply of adequate quantity and pressure to supply the equipment.**

* * * * *

RECORDKEEPING AND REPORTING

§ 288.283. Annual operation report.

* * * * *

(b) The annual operation report, which shall be submitted on a form supplied by the Department, shall include the following:

(1) The weight or volume of each type of solid waste received. **For noncaptive facilities, the report shall include the average daily volume totals computed in accordance with § 288.221 (relating to daily volume).**

* * * * *

(c) The annual operation report shall be accompanied by a nonrefundable annual permit administration fee of **[$2,500] $4,600** in the form of a check payable to the "Commonwealth of Pennsylvania."

* * * * *

CLOSURE PROVISIONS

§ 288.292. Closure.

* * * * *

(b) At least 180 days before **implementation of a** closure **[or partial closure] plan,** the operator shall review its approved closure plan to determine whether the plan requires modification, and shall submit proposed changes to the Department for approval under § 287.222 (relating to permit modification).

(c) If groundwater degradation exists at closure or occurs after closure, a person shall meet one of the following:

(1) Continue to implement an approved abatement plan.

(2) Submit an application for a closure plan modification in accordance with the procedures for a major permit modificaiton. The operator shall select one or more remediation standards that will be met in accordance with the final closure certifi-

cation requirements in § 287.342 (relating to final closure certification). The Department will accept the operator's selection of remediation standards if the requirements of subsection (d) are met.

(d) An application for a closure plan modification shall include the following:

(1) Technical information and supporting documentation identifying the remediation activities that will be conducted to meet and maintain the remediation standards.

(2) If a remedy relies on access to or use of properties owned by third parties, for remediation or monitoring, documentation of cooperation or agreement.

Subchapter D. ADDITIONAL REQUIREMENTS FOR CLASS I RESIDUAL WASTE LANDFILLS ADDITIONAL APPLICATION REQUIREMENTS

§ 288.412. Liner system and leachate control plan.

* * * * *

(c) The application shall demonstrate that leachate will not adversely affect the physical or chemical characteristics of the proposed liner system, or inhibit the liner's ability to restrict the flow of solid waste, solid waste constituents or leachate, based on **[the most recent edition of EPA Method 9090, (Compatibility Test for Wastes and Membrane Liners), or other documented data. The most recent edition of EPA Method 9090 can be obtained from the Department or from the National Technical Information Service (NTIS), United States Department of Commerce, Springfield, VA 22161] EPA or ASTM guidelines approved by the Department.**

(d) The application shall include a complete description of the physical, chemical, mechanical and thermal properties for the proposed primary and secondary liners, based on ASTM methods when appropriate. Except to the extent that the Department waives in writing one or more of the following for nonsynthetic secondary liners, these properties **[shall]** include:

* * * * *

(19) The percentage of recycled material.

ADDITIONAL OPERATING REQUIREMENTS—GENERAL

§ 288.422. Areas where Class I residual waste landfills are prohibited.

(a) Except for areas that were permitted prior to July 4, 1992, Class I residual waste landfills may not be operated as follows:

* * * * *

(4) In **[coal bearing]** areas underlain by recoverable or mineable **[coals] minerals** unless the operator of the facility demonstrates and the Department finds, in writing, that the operator owns the underlying **[coal] minerals. This requirement does not apply to the expansion of captive facilities permitted prior to July 4, 1992.**

* * * * *

(7) **[Within] If occupied dwellings are nearby, the following apply:**

(i) For a residual waste landfill permit issued prior to _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal), or for an expansion of a residual waste landfill that was permitted prior to _____ (*Editor's Note*: The blank refers to the effective date of final adoption of this proposal), or for a captive residual waste landfill within 300 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the facility being closer than 300 feet. **[Except for facilities permitted prior to July 4, 1992, the] The** disposal area of a residual waste landfill may not be within 500 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the disposal area being closer than 500 feet. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

(ii) For a residual waste landfill, except for a captive residual waste landfill, permit issued on or after _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal), within 300 yards measured horizontally from an occupied dwelling, unless the owner of the dwelling has provided a written waiver consenting to the facility being closer than 300 yards. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

* * * * *

(10) **[Within 25 feet of a coal seam, coal outcrop or coal refuse, unless the applicant demonstrates that the waste is noncombustible.**

(11)] * * *

* * * * *

[(12)] (11) If the facility receives or proposes to receive putrescible waste the following apply:

(i) Within 10,000 feet—or 3,048 meters—of an airport runway **[that is or will be end]** used by **[turbine-powered] turbojet** aircraft during the life of disposal operations under the permit **unless the operator can demonstrate that he landfill is designed and operated so that the landfill does not pose a bird hazard to aircraft.**

(ii) Within 5,000 feet—or 1,524 meters—of an airport runway **[that is or will be end]** used by piston-type aircraft during the life of disposal operations under the permit **unless the operator can demonstrate that the landfill is designed and operated so that the landfill does not pose a bird hazard to aircraft.**

(iii) For purposes of this subsection:

(A) "Airport" means a public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

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

(12) If a school, park or playground is nearby, the following apply:

(i) Except for an expansion of a noncaptive residual waste landfill permit issued prior to _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal), for a noncaptive

residual waste landfill permit issued on or after _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal), within 300 yards of the following:

(A) A building which is owned by a school district or school and used for instructional purposes.

(B) A park.

(C) A playground.

(ii) The current property owner of a school building, park or playground may waive the 300-yard prohibition by signing a written waiver. Upon receipt of the waiver, the Department will waive the 300-yard prohibition and will not use the prohibition as the basis for the denial of a new permit.

* * * * *

§ 288.423. Minimum requirements for acceptable waste.

(a) A person or municipality may not dispose of residual waste at a Class I residual waste landfill unless the waste meets the following criteria:

* * * * *

(6) The physical characteristics of this waste will not cause or contribute to structural instability or other operating problems at the site.

* * * * *

ADDITIONAL OPERATING REQUIREMENTS—LINER SYSTEM

§ 288.432. General limitations.

(a) **[At least 4 feet shall be maintained between the top] The bottom** of the subbase of the liner system **[and] cannot be in contact with** the seasonal high water table or perched water table without the use of groundwater pumping systems.

* * * * *

(2) Drainage systems may be utilized to **[maintain a 4-foot isolation distance] prevent contact** between the **[top] bottom** of the subbase of the liner system and the seasonal high water table or perched water table. The operator may not use a drainage system if the system is likely to adversely affect the quality or quantity of water provided by a public or private water supply, even if a replacement supply is available under § 288.245 (relating to water supply replacement). The drainage system shall be limited to drain tile, piping, french drains or equivalent methods.

(b) For unconfined aquifers, at least 8 feet shall be maintained between the **[top] bottom** of the subbase of the liner system and the regional groundwater table. The regional groundwater table may not be artificially lowered.

(c) For confined aquifers, at least 8 feet shall be maintained between the **[top] bottom** of the subbase of the liner system and the top of the confining layer or the shallowest level below the bottom of the subbase where groundwater occurs as a result of leakage from natural or other preexisting causes. The integrity of the confining layer shall not be compromised by excavation.

* * * * *

§ 288.433. Subbase.

* * * * *

(b) Unless alternative design requirements to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the subbase shall meet the following design requirements. The subbase shall:

* * * * *

(2) **[Have a minimum bearing capacity of 4,500 pounds per square foot plus the total applied load in pounds per square foot.**

(3)] Have a postsettlement slope of at least 2% and no more than **[25%] 33%**.

§ 288.434. Secondary liner.

* * * * *

(b) *Alternative design requirements.* Unless alternative design requirements to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the secondary liner shall meet**, at the minimum,** the requirements of Appendix A, Table I (relating to minimum liner design standards).

* * * * *

§ 288.435. Leachate detection zone.

* * * * *

(b) Unless alternative design requirements to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the leachate detection zone of a liner system shall meet the following design requirements:

* * * * *

(5) The piping system shall also meet the following requirements:

* * * * *

(ii) **[The distance between pipes in the piping system may not exceed 100 feet on center.**

(iii)] * * *

[(iv)] (iii) * * *

[(v)] (iv) * * *

* * * * *

(f) If sampling results indicate the presence of constituents at concentrations that could result in **[exceedance of mandatory abatement trigger levels for the facility] groundwater degradation at a monitoring well**, the operator shall:

(1) Submit to the Department a remedial plan for controlling the source of leachate in the leachate detection zone **and correcting a malfunction or defect in the liner system**, and implement the plan upon Department approval.

* * * * *

§ 288.436. Primary liner.

* * * * *

(b) *Alternative design standards.* Unless alternative design standards to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the

primary liner shall meet**, at the minimum,** the requirements of Appendix A, Table I (relating to minimum liner design standards).

* * * * *

§ 288.438. Leachate collection system within protective cover.

(a) The leachate collection system within the protective cover shall meet the following performance standards. The leachate collection system shall:

* * * * *

(2) Ensure that the depth of leachate on or above the primary liner does not exceed 1 foot**, unless a greater depth is approved by the Department in the permit for sump areas or for a 25-year, 24-hour precipitation event where the 1 foot of head will be exceeded for less than 3 days.**

* * * * *

ADDITIONAL OPERATING REQUIREMENTS—LEACHATE TREATMENT

§ 288.454. Leachate recirculation.

(a) * * *

* * * * *

(b) An alternative leachate recirculation method may be used if approved by the Department.

§ 288.455. Leachate collection and storage.

* * * * *

(b) An onsite leachate storage system shall be part of each leachate treatment method used by the operator. The storage system shall contain impoundments or tanks for storage of leachate. **[The] for noncaptive facilities, the** tanks or impoundments shall have a storage capacity at least equal to the maximum expected production of leachate for a 30-day period for the life of the facility estimated under § 288.413 (relating to leachate treatment plan). **For captive facilities, the tank or impoundment shall have sufficient storage capacity to ensure proper operation of the treatment facility in accordance with the approved leachate treatment plan, shall meet the performance standard in § 288.438(a)(2) (relating to leachate collection system within protective cover) and shall comply with The Clean Streams Law.** No more than 25% of the total leachate storage capacity may be used for flow equalization on a regular basis.

* * * * *

(d) The storage capacity of impoundments and tanks at a site shall be increased**, if additional storage is required,** prior to each major phase of construction and as otherwise necessary.

* * * * *

(g) All underground pipes used for the transport of leachate from the liner system to the leachate storage impoundments or tanks shall be equipped with secondary containment. The secondary containment shall be designed, constructed and installed to direct any release to an area that can be inspected for leaks.

§ 288.456. Leachate analysis and sludge handling.

(a) Upon commencement of leachate flow from the facility, the operator shall sample, analyze and maintain a record of the following:

* * * * *

(2) On a quarterly basis, unless otherwise specified in the permit, the chemical composition of leachate flowing into the leachate treatment system. The analysis shall be sufficient to determine the impact of leachate on the liner system, the effectiveness of the leachate treatment system, the need for modification of the groundwater monitoring system or the effluent limitations in an NPDES permit, and the actual characteristics of leachate from the waste disposed at the facility. For the purpose of this analysis, the leachate sample shall be collected from the influent storage tank or impoundment and shall be representative of the average mixed influent leachate quality. **The Department may modify the frequency of chemical analysis or not require certain constituents to be tested following four consecutive quarters of analysis if the operator demonstrates that modifying the frequency of chemical analysis will not compromise groundwater protection.**

* * * * *

Subchapter E. ADDITIONAL REQUIREMENTS FOR CLASS II RESIDUAL WASTE LANDFILLS

ADDITIONAL APPLICATION REQUIREMENTS

§ 288.512. Liner system and leachate control plan.

* * * * *

(c) The application shall demonstrate that leachate will not adversely affect the physical or chemical characteristics of the proposed liner system, or inhibit the liner's ability to restrict the flow of solid waste, solid waste constituents or leachate based on **[the most recent edition of EPA Method 9090, (Compatibility Test for Wastes and Membrane Liners) or other documented data. The most recent edition of EPA Method 9090 can be obtained from the Department or from the National Technical Information Service (NTIS), United States Department of Commerce, Springfield, VA 22161] EPA or ASTM guidelines approved by the Department.**

* * * * *

(19) The percentage of recycled material.

ADDITIONAL OPERATING REQUIREMENTS—GENERAL

§ 288.522. Areas where Class II residual waste landfills are prohibited.

(a) Except for areas that were permitted prior to July 4, 1992, Class II residual waste landfills may not be operated as follows:

* * * * *

(4) In **[coal bearing]** areas underlain by recoverable or mineable **[coals] minerals,** unless the operator of the facility demonstrates and the Department finds, in writing, that the operator owns the underlying **[coal] minerals. This requirement does not apply to the expansion of captive facilities permitted prior to July 4, 1992.**

* * * * *

(7) **[Within] If occupied dwellings are nearby, the following apply:**

(i) For a residual waste landifll permit issued prior to _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), or for an expansion of a residual waste landfill that was permitted prior to _____ (*Editor's Note*: The blank refers to the effective date of publication of this proposal.), or for a captive residual waste landfill within 300 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the facility being closer than 300 feet. **[Except for facilities permitted prior to July 4, 1992, the] The** disposal area of a residual waste landfill may not be within 500 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the disposal area being closer than 500 feet. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

(ii) For a residual waste landfill, except for a captive residual waste landfill permit issued on or after _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), within 300 yards measured horizontally from an occupied dwelling, unless the owner of the dwelling has provided a written waiver consenting to the facility being closer than 300 yards. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

* * * * *

(10) **[Within 25 feet of a coal seam, coal outcrop or coal refuse, unless the applicant demonstrates that the waste is noncombustible.**

(11)] (10) * * *

[(12)] (11) If the facility receives or proposes to receive putrescible waste as follows:

(i) Within 10,000 feet—or 3,048 meters—of an airport runway **[that is or will be end]** used by **[turbine-powered] turbojet** aircraft during the life of disposal operations under the permit **unless the operator can demonstrate that the landfill is designed and operated so that the landfill does note pose a bird hazard to aircraft.**

(ii) Within 5,000 feet—or 1,524 meters—of an airport runway **[that is or will be end]** used by piston-type aircraft during the life of disposal operations under the permit **unless the operator can demonstrate that the landfill is designed and operated so that the landfill does not pose a bird hazard to aircraft.**

(iii) For purposes of this subsection:

(A) "Airport" means a public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

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

(12) If a school, park or playground is nearby, the following apply:

(i) Except for an expansion of a noncaptive residual waste landfill permit issued prior to _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), for a noncaptive residual waste landfill permit issued on or after _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), within 300 yards of the following:

(A) A building which is owned by a school district or school and used for instructional purposes.

(B) A park.

(C) A playground.

(ii) The current property owner of a school building, park or playground may waive the 300-yard prohibition by signing a written waiver. Upon receipt of the waiver, the Department will waive the 300-yard prohibition and will not use the prohibition as the basis for the denial of a new permit.

* * * * *

§ 288.523. Minimum requirements for acceptable waste.

(a) A person or municipality may not dispose of residual waste at a Class II residual waste landfill unless the waste meets the following criteria:

(1) The residual waste may not be of a type from which the maximum concentration obtained for a contaminant, based on a chemical analysis of its leachate submitted under § 287.132 (relating to chemical analysis of waste), and approved by the Department, exceeds 50 times the **[groundwater parameter] waste classification standard** for that contaminant. If analytical quantitation limits prevent determination of the acceptability of a residual waste under this paragraph, the Department may consider the total analysis of the waste as well as the physical and chemical characteristics of the contaminant in making a determination of acceptability of the waste at the facility.

(2) Notwithstanding the limitation in paragraph (1), the Department may authorize the disposal of residual waste at a monofill if the waste is of a type from which the maximum concentration obtained for a contaminant, based on a chemical analysis of its leachate submitted under § 287.132, exceeds 50 times the SMCL for that contaminant, if the SMCL is the **[groundwater parameter] waste classification standard** for the contaminant. The Department may authorize the disposal of the waste only upon a demonstration that disposal of the waste at the facility will not cause groundwater degradation that exceeds the SMCL for a contaminant at a monitoring point or groundwater degradation that exceeds background levels at the property boundary for the contaminant.

* * * * *

(4) The Department may authorize a facility which disposes of a waste in accordance with a permit under this article to continue to dispose of the waste at the facility although a **[drinking water standard] waste classification standard** for a contaminant has been changed so that the waste would no longer meet the criteria for disposal of the waste at the facility under paragraph (1), if the operator of the facility demonstrates to the Department's satisfaction that disposal of the waste will not cause groundwater degradation that exceeds the **[groundwater parameter] waste classification standard** for a contaminant at a monitoring point or groundwater degradation that exceeds background levels at the property boundary for a contaminant.

* * * * *

(12) The physical characteristics of the waste will not cause or contribute to structural instability or other operating problems at the site.

* * * * *

ADDITIONAL OPERATING REQUIREMENTS—LINER SYSTEM

§ 288.532. General limitations.

(a) **[At least 4 feet shall be maintained between the top] The bottom** of the subbase of the liner system **[and] cannot be in contact with** the seasonal high table or perched water table without the use of groundwater pumping systems.

* * * * *

(2) Drainage systems may be utilized to **[maintain a 4-foot isolation distance] prevent contact** between the **[top] bottom** of the subbase of the liner system and the seasonal high water table or perched water table. The operator may not use a drainage system if the system is likely to adversely affect the quality or quantity of water provided by any public or private water supply, even if a replacement supply is available under § 288.245 (relating to water supply replacement). The drainage system shall be limited to drain tile, piping and french drains, or equivalent methods.

(b) For unconfined aquifers, at least 8 feet shall be maintained between the **[top] bottom** of the subbase of the liner system and the regional groundwater table. The regional groundwater table may not be artificially lowered.

(c) For confined aquifers, at least 8 feet shall be maintained between the **[top] bottom** of the subbase of the liner system and the top of the confining layer or the shallowest level below the bottom of the subbase where groundwater occurs as a result of leakage from natural or other pre-existing causes. The integrity of the confining layer shall not be compromised by excavation.

* * * * *

§ 288.533. Subbase.

* * * * *

(b) Unless alternative design requirements to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the subbase shall meet the following design requirements. The subbase shall:

* * * * *

(2) **[Have a minimum bearing capacity of 4,500 pounds per square foot plus the total applied load in pounds per square foot.**

(3)] Have a postsettlement slope of at least 2% and no more than **[25%] 33%**.

§ 288.534. Leachate detection zone.

* * * * *

(b) Unless alternative design requirements to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the leachate detection zone of a liner system shall meet the following design requirements. The leachate detection zone shall:

* * * * *

(4) Contain a perforated piping system capable of detecting and intercepting liquid within the leachate detection zone and conveying the liquid to a collection sump for storage, processing or disposal. The sump shall be separate from the leachate collection sump and shall be of sufficient size to transmit leachate that is generated. The piping system shall also meet the following:

* * * * *

(ii) **[The distance between pipes in the piping system may not exceed 100 feet on center.**

(iii)] * * *

[(iv)] (iii) * * *

[(v)] (iv) * * *

* * * * *

(f) If sampling results indicate the presence of constituents at concentrations that could result in **[exceedance of mandatory abatement trigger levels for the facility] groundwater degradation**, the operator shall submit the following to the Department:

(1) A remedial plan for controlling the source of leachate in the leachate detection zone **and correcting a malfunction or defect in the liner system**, and implement the plan upon Department approval.

* * * * *

§ 288.535. Liner.

* * * * *

(b) *Alternative design requirements.* Unless alternative design requirements to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the liner shall meet**, at the minimum,** the requirements of Appendix A, Table II (relating to minimum liner design standards).

* * * * *

§ 288.537. Leachate collection system within protective cover.

(a) The leachate collection system within the protective cover shall meet the following performance standards. The leachate collection system shall:

* * * * *

(2) Ensure that the depth of leachate on or above the liner does not exceed 1 foot**, unless a greater depth approved by the Department in the permit for sump areas or for a 25-year, 24-hour precipitation event where the 1 foot of head will be exceeded for less than 3 days**.

* * * * *

ADDITIONAL OPERATING REQUIREMENTS—LEACHATE TREATMENT

§ 288.554. Leachate recirculation.

(a) * * *

* * * * *

(b) An alternate leachate recirculation method may be used if approved by the Department.

§ 288.555. Leachate collection and storage.

* * * * *

(b) An onsite leachate storage system shall be part of each leachate treatment method used by the operator.

The storage system shall contain impoundments or tanks for storage of leachate. **[The] For noncaptive facilities, the** tanks or impoundments shall have a storage capacity at least equal to the maximum expected production of leachate for a 30-day period for the life of the facility estimated under § 288.513 (relating to leachate treatment plan). **For captive facilities, the tank or impoundment shall have sufficient storage capacity to ensure proper operation of the treatment facility in accordancee with the approved leachate treatment plan, shall meet the performance standard in § 288.537(a)(2) and shall comply with the Clean Streams Law.** No more than 25% of the total leachate storage capacity may be used for flow equalization on a regular basis.

* * * * *

(d) The storage capacity of impoundments and tanks at a site shall be increased**, if additional storage is required,** prior to each major phase of construction and as otherwise necessary.

* * * * *

(g) All underground pipes used for the transport of leachate from the liner system to the leachate storage impoundments or tanks shall be equipped with secondary containment. The secondary containment shall be designed, constructed and installed to direct any release to an area that can be inspected for leaks.

§ 288.556. Leachate analysis and sludge handling.

(a) Upon commencement of leachate flow from the facility, the operator shall sample, analyze and maintain a record of the following:

* * * * *

(2) On a quarterly basis, unless otherwise provided in the permit, the chemical composition of leachate flowing into the leachate treatment system. The analysis shall be sufficient to determine the impact of leachate on the liner system, the effectiveness of the leachate treatment system, the need for modification of the groundwater monitoring system or the effluent limitations in an NPDES permit, and the actual characteristics of leachate from the waste disposed at the facility. For the purpose of this analysis, the leachate sample shall be collected from the influent storage tank or impoundment and shall be representative of the average mixed influent quality. **The Department may modify the frequency of chemical analysis or not require certain constituents to be tested following four consecutive quarters of analysis if the operator demonstrates that modifying the frequency of chemical analysis will not compromise groundwater protection.**

* * * * *

Subchapter F. ADDITIONAL REQUIREMENTS FOR CLASS III RESIDUAL WASTE

ADDITIONAL OPERATING REQUIREMENTS—GENERAL

§ 288.621. Basic requirements.

(a) In addition to the operating requirements in Subchapter C (relating to operating requirements), a person or municipality that operates a Class III residual waste landfill shall comply with §§ 288.622 **[and 288.624]—288.625 [(relating to areas where Class III residual waste landfills are prohibited; and attenuating soil base).**

* * * * *

§ 288.622. Areas where Class III residual waste landfills are prohibited.

(a) Except for areas that were permitted prior to July 4, 1992, a Class III residual waste landfill may not be operated as follows:

* * * * *

(4) In **[coal bearing]** areas underlain by recoverable or mineable **[coals] minerals**, unless the operator of the facility demonstrates and the Department finds, in writing, that the operator owns the underlying **[coal] minerals. This requirement does not apply to the expansion of captive facilities permitted prior to July 4, 1992.**

* * * * *

(7) **[Within] If occupied dwellings are nearby, the following apply:**

(i) For a residual waste landfill permit issued prior to _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), or for an expansion of a residual waste landfill that was permitted prior to _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal), or for a captive residual waste landfill within 300 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the facility being closer than 300 feet. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner. **[Except for facilities permitted prior to July 4, 1992, the] The** disposal area of a residual waste landfill may not be within 500 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the disposal area being closer than 500 feet. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

(ii) For a residual waste landfill, except for a captive residual waste landfill permit issued on or after _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), within 300 yards measured horizontally from an occupied dwelling, unless the owner of the dwelling has provided a written waiver consenting to the facility being closer than 300 yards. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

* * * * *

(10) **[Within 25 feet of a coal seam, coal outcrop or coal refuse, unless the applicant demonstrates that the waste is noncombustible.**

(11)] (10) * * *

[(12)] (11) If the facility receives or proposes to receive putrescible waste as follows:

(i) Within 10,000 feet—or 3,048 meters—of an airport runway **[that is or will be end]** used by **[turbine-powered] turbojet** aircraft during the life of disposal operations under the permit **unless the operator can demontrate that the landfill is designed and operated so that the landfill does not pose a bird hazard to aircraft.**

(ii) Within 5,000 feet—or 1,524 meters—of an airport runway **[that is or will be end]** used by piston-type aircraft during the life of disposal operations under the permit **unless the operator can demonstrate that the landfill is designed and operated so that the landfill does not pose a bird hazard to aircraft.**

(iii) For pusposes of this subsection:

(A) "Airport" means a public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

(B) "Bird hazard" means an increase in the likehood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.

(12) If a school, park or playground is nearby, the following apply:

(i) Except for an expansion of a noncaptive residual waste landfill permit issued prior to _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposed.), for a noncaptive residual waste landfill permit issued on or after _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), within 300 yards of the following:

(A) A building which is owned by a school district or school and used for instructional purposes.

(B) A park.

(C) A playground.

(ii) The current property owner of a school building, park or playground may waive the 300-yard prohibition by signing a written waiver. Upon receipt of the waiver, the Department will waive the 300-yard prohibition and will not use the prohibition as the basis for the denial of a new permit.

* * * * *

§ 288.623. Minimum requirements for acceptable waste.

(a) A person or municipality may not dispose of residual waste at a Class III residual waste landfill unless the waste meets all of the following criteria:

(1) The residual waste may not be of a type from which the maximum concentration obtained for contaminant, based on a chemical analysis of its leachate submitted under § 287.132 (relating to chemical analysis of waste), and approved by the Department, exceeds the following:

(i) For metals and other cations, 25 times the **[groundwater parameter] waste classification standard** for a contaminant.

(ii) For contaminants other than metals and cations, the **[groundwater parameter] waste classification standard** for a contaminant. If analytical quantitation limits prevent determination of the acceptability of a residual waste under this paragraph, the Department may consider the total analysis of the waste as well as the physical and chemical characteristics of the contaminant in making a determination of acceptability of the waste at the facility.

(2) Residual waste may not be disposed of at the facility if the disposal of the waste at the facility will result in a level of groundwater degradation at one or more monitoring points that exceeds the level of degradation that would result at the same monitoring points from the disposal of the waste at the facility if the facility were designed, constructed and operated as a Class II landfill. The Department may approve the disposal of waste at a monofill that contains contaminants other than metals or cations with a maximum concentration that is less than 10 times the **[groundwater parameter] waste classification standard** for the contaminants, based on a chemical analysis of its leachate submitted under § 287.132, if the following are met:

* * * * *

(4) The Department may authorize a facility which disposes of a waste in accordance with a permit under this article to continue to dispose of the waste at the facility although a **[groundwater parameter] waste classification standard** for a contaminant has been amended in a way that the waste would no longer meet the criteria for disposal of the waste at the facility under paragraph (1), if the operator of the facility demonstrates to the Department's satisfaction that disposal of the waste will not cause degradation that exceeds the **[groundwater parameter] waste classification standard** for a contaminant at a monitoring point or groundwater degradation that exceeds background levels at the property boundary for a contaminant.

* * * * *

(14) The physical characteristics of the waste will not cause or contribute to structural instability or other operating problems at the site.

* * * * *

§ 288.624. Attenuating soil **[base].**

(a) ***Disposal of residual waste.*** Residual waste may not be disposed at a Class III residual waste landfill, unless **[the following conditions are met:] attenuating soil exists in the disposal area or has been placed on the entire disposal area.**

(1) **[At least 4 feet of attenuating soil exists or has been placed on the entire disposal area, or 1 foot of attenuating soil exists or has been placed for every 4 feet of waste approved by the Department in the permit, whichever is greater.**

(2)] * * *

[(3)] (2) * * *

(b) *Standards of performance.* The attenuating soil shall meet the following standards of performance:

(1) The attenuating soil shall prevent migration of contaminants to the surface and groundwater to the greatest degree that is technologically possible.

(2) The performance of the attenuating soil may not be affected by the physical or chemical characteristics of the waste.

(3) The attenuating soil shall cover the bottom and sidewalls of the facility.

(c) *Alternative design requirements.* Unless alternative design requirements to meet the performance standards in subsection (b) are approved as part of the permit under § 287.231 (relating to equivalency review procedure) where site-specific conditions are included in the demonstration, the attenuating soil shall meet the requirements of subsection (d). If a design under this section is modified, the modification shall be a major permit modification.

[(b)] (d) ***Requirements.*** The attenuating soil required by this section shall meet the following requirements:

* * * * *

(3) **[The combustible or coal content of the soil may not exceed 12% by weight.**

(4)] (3) * * *

[(5)] (4) * * *

[(6)] (5) * * *

APPENDIX A

TABLE I

MINIMUM LINER DESIGN STANDARDS

LINER MATERIAL	*FUNCTION*	*MINIMUM FIELD THICKNESS (UNITS AS SPECIFIED)*	*LINER DENSITY (TESTS AS SPECIFIED)*	*REMARKS*
Geomembranes	Primary or **Secondary** Liner	**[50] 30** mil	N/A	1. A greater thickness may be required depending upon the recommendations of the manufacturer. **HDPE liners shall be at least 60 mil.**
Geomembranes	**[Secondary Liner,]** Cap	**[50] 30** mil **[40 mil]**	N/A	1. A greater thickness may be required depending upon the recommendations of the manufacturer.
* * * * *				
[Prefabricated Clay Mats] Geosynthetic Clay Liner (GCL)	Composite Component	**[1/4 inch] N/A**	N/A	1. Minimum of **[one] 3/4** pound of powdered **or granular** sodium bentonite per square foot.

* Percentage of maximum when using Standard Proctor method of design (Pa. PTM No. 106, Method B).

TABLE II
MINIMUM LINER DESIGN STANDARDS

LINER MATERIAL	*FUNCTION*	*MINIMUM FIELD THICKNESS (UNITS AS SPECIFIED)*	*LINER DENSITY (TESTS AS SPECIFIED)*	*REMARKS*
Geomembranes	Liner, Cap	**[50] 30** mil **[40 mil]**	N/A	1. A greater thickness may be required depending upon the recommendations of the manufacturer. **HDPE liners shall be at least 60 mil.**
Natural & Remolded Clay	Cap, Composite Component	2 feet 1 foot	**[≥]** ≤90%* **[≥]** ≤90%*	1. Minimum of 30% fines by weight less than 0.074 mm particle size (#200 sieve). 2. Plasticity Index greater than or equal to 10. 3. No coarse fragments greater than 3/4 inch in diameter.
* * * * *				
[Prefabricated Clay Mats] Geosynthetic Clay Liner (GCL)	Composite Component	**[1/4 inch] N/A**	N/A	1. Minimum of **[one] 3/4** pound of powdered **or granular** sodium bentonite per square foot.

* Percentage of maximum when using Standard Proctor method of design (Pa. PTM No. 106, Method B).

CHAPTER 289. RESIDUAL WASTE DISPOSAL IMPOUNDMENTS

Subchapter B. APPLICATION REQUIREMENTS

PHASE I APPLICATION REQUIREMENTS—GENERAL PROVISIONS

§ 289.112. Facility plan.

An application to operate a residual waste disposal impoundment shall contain conceptual drawings and a narrative describing the following:

* * * * *

(2) **[The quantity, quality and availability of acceptable cover material and liner system construction material, both on and off the proposed permit area] A detailed description of the volume of soil needed to construct and operate the facility.**

§ 289.113. Maps and related information.

(a) An application shall contain a topographic map, on a scale of 1 inch equals no more than 200 feet with 10-foot maximum contour intervals. The Department may, in writing, approve the use of a different horizontal scale **[for facilities larger than 250 acres]**. The application shall include the map and necessary narrative descriptions, which show the following:

* * * * *

[(c) An application shall also contain a United States Department of Agriculture Soil Conservation Service soil map, or aerial photographs when current soils maps are unavailable, for the proposed permit area and adjacent area showing the site boundaries, soil types, and the location of test pits of excavations taken under § 289.133 (relating to map and grid requirements).]

PHASE I APPLICATION REQUIREMENTS—SITE ANALYSIS

§ 289.122. Geology and groundwater description.

(a) An application shall contain a description of the geology and groundwater in the proposed permit area and adjacent areas down to and including the lowest aquifer that may be affected by the facility, including the following:

* * * * *

(8) Wellhead protection areas in accordance with § 109.1 (relating to definitions) that may be impacted by the facility.

(9) A groundwater contour map based upon the highest groundwater level recorded monthly in each boring for the previous year.

* * * * *

§ 289.124. Soil description.

(a) An application shall contain:

(1) **[A description of the soils within the proposed permit area and adjacent area down to the bedrock, including, for each soil horizon, depth, matrix color, texture, structure, consistency, degree of mottling, mottling colors and laboratory particle size analyses] The depth to the seasonal high water table within the proposed permit area and adjacent area to demonstrate that the seasonal high water table will not be in contact with the liner system.**

(2) A description of the soils to be used for intermediate and final cover, **[liner system]** and facility construction, including **[for each onsite or offsite borrow area,] chemical description,** texture, laboratory particle size analyses, **and** quantity **[and cross section] cross sections** of the borrow pits within the proposed permit area **shall be included**.

* * * * *

§ 289.127. Mineral deposits information.

* * * * *

(b) If the proposed permit area and adjacent area overlie recoverable or mineable **[coals] mineral deposits**, the applicant shall demonstrate that the applicant owns the **[coal] mineral deposits** and shall warrant that the **[coal] minerals** will not be mined as long as residual waste remains on the site. **This requirement does not apply to the expansion of captive facilities permitted prior to July 4, 1992.**

§ 289.128. Notification of proximity to airport.

An applicant shall notify the Federal Aviation Administration, the Department and the airport if a proposed disposal impoundment or lateral expansion, that plans to receive putrescible waste, is within a 5-mile radius of an airport runway end used by turbojet or piston-type aircraft.

PHASE II APPLICATION REQUIREMENTS—GENERAL PROVISIONS

§ 289.132. Operation plan.

An application shall contain a description of the residual waste disposal impoundment operations proposed during the life of the facility within the proposed permit area, including, at a minimum, the following:

(1) A narrative describing the type and method of residual waste disposal impoundment procedures, **inspection and monitoring of incoming waste,** sequence of disposal activity, type of disposal activity, proposed engineering techniques and the major equipment to be used under § 289.225 (relating to equipment), using the maps and grids required by § 289.133 (relating to map and grid requirements) as a basis for the description.

* * * * *

[(3) A narrative describing the type and size of equipment that is proposed to be used at the facility, as well as a description of the availability of standby equipment in the event of breakdown or maintenance.

(4) A narrative describing a plan for training facility operators and other personnel concerning the operation and approved design of the facility.]

[(5)] (3) ***

[(6)] (4) ***

[(7)] (5) ***

* * * * *

[(8)] (6) The proposed operating hours of the proposed facility. **The operating hours include those hours related to construction and other activities related to operation of the facility.**

§ 289.134. Plan for access roads.

The application shall contain designs, cross sections and specifications for access roads, including load limits, in accordance with § 289.223 (relating to access roads). **Access roads shall be designed and constructed to adequately handle the truck traffic expected at the disposal facility.**

§ 289.136. Nuisance **minimization and** control plan.

(a) The application shall contain a plan in accordance with § 289.228 (relating to nuisance **minimization and** control) to **[prevent] minimize** and control hazards or nuisances from vectors, odors, noise, dust and other nuisances not otherwise provided for in the permit application. **[The plan shall provide for the routine assessment of vector infestation and shall also provide for countermeasures. The plan may include a control program involving a contractual arrangement for services with an exterminator.]**

(b) The plan shall include the following:

(1) Provisions for the routine assessment and control of vector infestation.

(2) Methods to minimize and control nuisances from odors, dustfall and noise off the property boundary from the facility.

(3) For odors, the determination of normal and adverse weather conditions based on site-specific meteorological data. Prior to the installation of equipment and collection of meteorological data, a protocol for the installation and data collection shall be approved by the Department.

(c) The plan required in subsection (a) may include a contractual arrangement for services of an exterminator or an air quality, noise, dust control or other professional.

§ 289.137. Daily volume.

The application shall contain proposed average and maximum daily volumes for the facility, and a detailed justification for these volumes, based on §§ 287.126 and 287.127 (relating to requirements for environmental assessment; and environmental assessment).

PHASE II APPLICATION REQUIREMENTS—COVER AND REVEGETATION

§ 289.141. Cover plan.

An application shall contain a plan for cover at the proposed facility under § **[§ 289.241 and]** 289.242 (relating to **[topsoil storage; and]** cover) including, at a minimum, the following information:

* * * * *

[(3) If cover material will be obtained from an offsite area not owned by the applicant, copies of contracts or other binding agreements showing that the applicant is authorized to obtain cover material from the offsite area for the term of the permit.]

PHASE II APPLICATION REQUIREMENTS—WATER QUALITY PROTECTION AND MONITORING

§ 289.152. Water quality monitoring plan.

(a) An application shall contain a water quality monitoring plan showing how the operator intends to comply with §§ 289.261—289.268 (relating to water quality monitoring). The plan shall include, at a minimum, the following:

* * * * *

(2) For new facilities, preoperational data showing existing groundwater quality, as required by § 289.123 (relating to groundwater quality description), and a procedure to establish **[background water] this groundwater** quality. For existing facilities, adequate monitoring data as required by § 288.123 (relating to groundwater quality description) to characterize **background** groundwater quality and a procedure to establish **[background water] this groundwater** quality.

(b) The application shall contain a groundwater sampling and analysis plan. The plan shall include:

* * * * *

(4) Procedures and techniques for evaluation of analytical results to determine if groundwater degradation**[, exceedances of mandatory abatement trigger levels or adverse effects on groundwater have] has** occurred.

[(5) Mandatory abatement trigger levels for each monitoring well for each contaminant for which monitoring is required under §§ 289.261—289.268.

(i) For facilities other than monofills which are permitted after July 4, 1992, including the expansion of the facilities that are operating or permitted on or before July 4, 1992, the proposed mandatory abatement trigger level for a contaminant at a monitoring point shall be equivalent to the background levels for the contaminant.

(ii) For monofills which are permitted after July 4, 1992, including the expansion of the facilities that are operating or permitted on or before July 4, 1992, the proposed mandatory abatement trigger level shall be equivalent to the maximum level of degradation that will be predicted, through modeling, to exist at the monitoring point for that contaminant based on the design, construction and operation of the facility. The application shall also include a demonstration of the validity and accuracy of the model at the proposed facility. A mandatory abatement trigger level may not exceed a groundwater parameter for a contaminant at a monitoring point, or background levels for the contaminant at the property boundary. If the background level for a contaminant is higher than the groundwater parameter for the contaminant, the proposed mandatory abatement trigger level may not exceed the background level for the contaminant at the monitoring point.

(iii) For facilities that are operating or permitted on or before July 4, 1992, the proposed mandatory abatement trigger level for a contaminant at a monitoring point shall be equivalent to the groundwater parameter for the contaminant, and shall be equivalent to background levels for the contaminant at the property boundary. If the background level for a contaminant is higher than the groundwater parameter for the contaminant, the proposed mandatory abatement trigger level for these facilities shall be the background level for the contaminant at a monitoring point.]

* * * * *

[(d) Once an application is determined to be administratively complete under § 287.202 (relating to completeness review), the applicant is not required to amend the application because a groundwater parameter has changed due to a change in data from the EPA's IRIS.

(e) The Department may approve a change in the groundwater parameter which is based on IRIS for a contaminant, if the applicant makes a clear and convincing demonstration to the Department that new studies not yet considered by the EPA in IRIS more accurately reflect the human health and environmental effects of a contaminant than IRIS.]

PHASE II APPLICATION REQUIREMENTS—CLOSURE PROVISIONS

§ 289.172. Closure plan.

(a) The application shall contain a plan describing the activities that are proposed to occur **[during the postclosure period] toward and after closure** to ensure compliance with this chapter.

(b) The closure plan shall include:

* * * * *

[(3) If the facility will close in stages, a description of how and when the facility will begin and implement partial closure.

(4)] (3) ***

[(5)] (4) A narrative description, including a schedule of measures that are proposed to be carried out **toward and** after closure at the facility, including measures relating to the following:

* * * * *

(vi) Access control**, including maintenance of access control**.

[(6)] (5) ***

[(7)] (6) ***

* * * * *

Subchapter C. OPERATING REQUIREMENTS

GENERAL PROVISIONS

§ 289.201. Basic limitations.

* * * * *

(e) All approved mitigation measures identified in the permit application shall be completed before a facility may accept waste unless otherwise authorized in writing by the Department for technical reasons.

WASTE LIMITATIONS

§ 289.212. Waste solidification.

* * * * *

(b) The waste in the impoundment after the requirements of subsection (a) have been met shall be capable of withstanding a minimum bearing capacity of 1.5 tons per square foot with a minimum factor of safety of 1.5. **The bearing capacity and minimum factor of safety may be waived by the Department in the permit based upon the postclosure use of the facility.**

DAILY OPERATIONS

§ 289.221. Signs and markers.

* * * * *

(d) A person or municipality that operates a noncaptive residual waste disposal impoundment shall identify the facility for the duration of operations by posting and maintaining a sign which is clearly visible **and can be easily seen and read** at the junction of each access road and public road. The sign shall be constructed of a durable, weather-resistant material **[and shall be of a minimum size of 3 feet by 4 feet with a light background and contrasting letters and numbers of a minimum height of 3 inches that can be easily seen and read. The sign shall show the name, business address and telephone number of the person or municipality that operates the facility, the operating hours of the facility, and the number of the current permit authorizing operation of the facility]**.

§ 289.223. Access roads.

* * * * *

(e) Except for captive facilities where the Department has set forth alternate requirements in the permit **and except for roads not leading to the disposal area**, the disposal impoundment shall maintain a minimum cartway width of one of the following:

* * * * *

(f) An access road negotiable by loaded collection vehicles shall be provided from the entrance gate of the facility to each unloading area **[,]. An access road shall be provided to each** treatment facility**, [or]** impoundment, **[located on the site. An access road shall also be provided to groundwater monitoring points] and groundwater monitoring point**. Other monitoring points shall be readily accessible.

[(g) An access road shall be constructed on a dry and stable area.

(h) Prior to the construction of a road at a facility other than a local captive facility, topsoil shall be removed and one of the following requirements shall be met:

(i) The topsoil shall be immediately used as final cover.

(ii) The topsoil shall be stored on a stable site and protected against erosion and compaction.]

[(i)] (g) ***

[(j)] (h) ***

[(k)] (i) ***

§ 289.224. Measurement **and inspection** of waste.

(a) The operator shall accurately measure waste that is disposed at an impoundment by weight.

(b) The operator of a noncaptive facility shall inspect and monitor incoming waste to insure that the disposal of waste is consistent with this article, unless otherwise required by the Department. The monitoring and inspection shall include screening of waste for radioactive isotopes and be consistent with § 287.134 (relating to waste analysis plan).

§ 289.225. Equipment.

* * * * *

(b) **[Standby equipment shall be located on the site or at a place where it can be available within 24 hours.]** If a breakdown of the operator's equipment occurs, the operator shall utilize standby equipment as necessary to comply with the act, the environmental protection acts, this subchapter and permit conditions.

§ 289.227. Air resources protection.

(a) The operator shall implement fugitive air contaminant control measures and otherwise prevent and control air pollution **[under] in accordance with** the Air Pollution Control Act (35 P. S. §§ 4001—4014) **[and Subpart C,]** Article III (relating to air resources) **and § 289.228 (relating to nuisance minimization and control). Minimization and control measures shall include the following:**

[(b)] (1) [The operator may] Ensuring that operation of the facility will not cause or contribute to an exceedance of an ambient air quality standard under § 131.3 (relating to ambient air quality standards).

[(c)] (2) [A person or municipality may not cause or allow] Ensuring that no open burning **occurs** at the facility.

(3) Minimizing the generation of fugitive dust emissions from the facility.

(b) The operator shall comply with the terms and conditions of an air quality plan approval and air quality operating permit issued to the facility.

§ 289.228. Nuisance **minimization and** control.

(a) ***Vectors.*** **[The] An** operator may not cause or allow the attraction, harborage or breeding of vectors.

(b) ***Other conditions.*** **[The] An** operator shall **[also prevent and eliminate] minimize and control other** conditions **[not otherwise prohibited by this subchapter]** that are harmful to the environment or public health, or which create safety hazards, odors, dust, noise, unsightliness and other public nuisances.

(c) *Odors.*

(1) An operator shall implement the plan approved under § 289.136 (relating to nuisance minimization and control plan) to minimize and control nuisances from odors. If the Department determines during operation of the facility that the plan is inadequate to minimize or control nuisance, the Department may modify the plan or require the operator to modify the plan and obtain Department approval.

(2) An operator shall perform regular, frequent and comprehensive site inspections to evaluate the effectiveness of cover, capping, gas collection and destruction, waste acceptance and all other waste management practices in reducing the potential for offsite odor creation.

(3) An operator shall promptly address and correct problems and deficiencies discovered in the course of inspections performed under paragraph (2).

§ 289.229. Daily volume.

(a) A person or municipality operating a residual waste impoundment may not receive solid waste at the impoundment in excess of the maximum or average daily volume approved in the permit.

(b) The average daily volume is a limit on the volume of solid waste that is permitted to be received at the facility, and shall be computed annually by averaging the total volume received over the year.

COVER AND REVEGETATION

§ 289.241. **[Topsoil storage] (Reserved).**

[(a) Unless topsoil is not needed for final cover under § 289.242 (relating to cover) or is unsuitable for final cover:

(1) Topsoil shall be removed in a separate layer prior to preparation of an area for disposal or other surface disturbance.

(2) If topsoil is less than 12 inches, a 12-inch layer which includes the topsoil and the unconsolidated materials immediately below the topsoil shall be removed, segregated, conserved and replaced as the upper layer of final cover.

(3) If topsoil or other materials removed under this subsection are not promptly redistributed as cover, they shall be stockpiled, temporarily vegetated and otherwise protected from wind and water erosion, unnecessary compaction and contaminants which lessen the capability of materials to support vegetation when redistributed on the site.

(b) Topsoil and other material removed under this section may not be removed from the site.]

§ 289.242. Cover.

(a) The operator shall place final cover within 1 year after closure. The Department may require placement and revegetation of an intermediate cover **[of soil] that meets the requirements of § 288.233 (relating to intermediate cover and slopes)**, during the period between closure and construction of the final cover system.

(b) Except as provided in subsection (c), the operator shall provide final cover in the following manner:

(1) A cap **[consisting of a uniform and compacted 2-foot layer of clay]** shall be placed and graded over the entire surface **of each final lift**. **[The Department may approve, in the permit, synthetic material of the type and specifications set forth for primary liners in § 289.436 (relating to primary liner) and for caps in Appendix A, Table I (relating to minimum liner design standards) in lieu of the 2-foot layer of clay.]** The cap may be no more permeable than 1.0 × 10-7 cm/sec. **The following performance standards for the cap shall be met:**

(i) The cap shall limit the migration of precipitation into the landfill to the greatest degree that is technologically possible.

(ii) The cap shall be resistant to physical and chemical failure.

(iii) The cap shall cover all areas where waste is disposed.

* * * * *

(c) The Department may waive **[or modify]** the cap and drainage layer requirements of subsection (b)(1) and (2) based on a demonstration that it is not necessary to limit infiltration into the waste.

(d) Unless alternative design requirements to meet the performance standards in subsection (b)(1) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the cap shall meet the design requirements for caps in Appendix A, Table II (relating to liner design standards).

[(d)] (e) The layer of material described in **[paragraph] subsection** (b)(3) and intermediate cover, if required, shall meet the following performance standards. Cover material shall:

* * * * *

(3) Be **[noncombustible] capable of controlling fires.**

* * * * *

(8) Be consistent with the waste acceptance plan.

[(e)] (f) Unless alternative design requirements to meet the performance standards in subsection **[(d)] (e)** are approved as part of the permit under § 287.231 **[(relating to equivalency review procedure), cover], the layer of material described in subsection (b)(3)** shall meet the following design requirements:

* * * * *

[(3) The combustible or coal content of the cover may not exceed 12% by weight.

(4)] (3) ***

[(5)] (4) ***

WATER QUALITY PROTECTION

§ 289.255. Water supply replacement.

(a) A person or municipality operating a residual waste disposal impoundment which adversely affects a water supply **by degradation, pollution or other means** shall restore the affected supply at no additional cost to the owner or replace the affected water supply with an alternate source that is of like quantity and quality to the original supply at no additional cost to the owner.

* * * * *

(d) Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply or extension of a private water supply, but do not include provision of bottled water or a water tank supplied by a bulk water hauling system, which are temporary water supplies.

WATER QUALITY MONITORING

§ 289.262. Number, location and depth of monitoring points.

* * * * *

(b) The upgradient and downgradient monitoring wells shall be:

* * * * *

(3) Located within 200 feet of the permitted disposal area, except as necessary to comply with subsection (c), **and located at the points of compliance**.

* * * * *

[(e) Wells drilled under this section shall be drilled by drillers licensed under the Water Well Drillers License Act (32 P. S. §§ 645.1—645.13).]

[(f)] (e) ***

§ 289.263. Standards for **wells and** casing of wells.

(a) Monitoring wells shall be cased as follows:

(1) The casing shall maintain the integrity of the monitoring well borehole **[,]** and shall be constructed of material that will not react with the groundwater being monitored.

* * * * *

(3) The well shall be constructed with a screen that meets the following requirements:

* * * * *

[(iv) The slot openings, design and screen diameter shall allow for effective well development.]

* * * * *

(5) The casing shall **be clearly visible and** protrude at least 1 foot above the ground, unless the Department has approved flush mount wells.

* * * * *

(7) **[If plastic casing is used, it shall be threaded to preclude potential sample contamination from solvent welded joints, unless otherwise provided by the Department in the permit] The casing shall be designed and constructed in a manner that prevents cross contamination between surface water and groundwater.**

(b) Monitoring well casings shall be enclosed in a protective casing that shall:

* * * * *

(5) Protrude **[at least 1 inch higher]** above **[grade than]** the monitoring well casing.

* * * * *

§ 289.266. Groundwater assessment plan.

(a) *Requirement.*

[(1)] A person or municipality operating a residual waste disposal impoundment shall prepare and submit to the Department a groundwater assessment plan within **[30] 60** days after one of the following occurs:

[(i)] (1) ***

[(ii)] (2) Laboratory **[analyses] analysis** of one or more public or private water supplies indicates groundwater degradation that could reasonably be attributed to the facility.

[(2) For residual waste disposal impoundments permitted or operating under the act or The Clean Streams Law on July 4, 1992, and for which data triggering the submission of a plan under this section exist on July 4, 1992, the plan shall be submitted to the Department by January 4, 1992.]

* * * * *

(c) *Assessment plan.* The groundwater assessment plan shall specify the manner in which the operator will determine the existence, quality, quantity, areal extent and depth of groundwater degradation and the rate and direction of migration of contaminants in the groundwa-

ter. A groundwater assessment plan shall be prepared by an expert in the field of hydrogeology. The plan shall contain, at a minimum, the following information:

(1) The number, location, size, casing type and depth of wells, lysimeters, borings, pits, piezometers and other assessment structures or devices to be used. **If the operator establishes compliance points as part of the assessment, the points shall be wells constructed in accordance with §§ 289.262 and 289.263 (relating to number, location and depth of monitoring points; and standards for wells and casing of wells).**

* * * * *

(5) Identification of the abatement standard that will be met.

* * * * *

§ 289.267. Abatement plan.

(a) The operator of a residual waste disposal impoundment shall prepare and submit to the Department an abatement plan when one of the following occurs:

(1) The groundwater assessment plan prepared and implemented **under** § 289.266 (relating to groundwater assessment plan) shows the presence of groundwater degradation for one or more contaminants at one or more monitoring points **[that exceeds the mandatory abatement trigger levels established by the Department in the permit for the contaminant at the monitoring point] and the analysis under § 289.266(c) indicates that an batement standard under subsection (c) will not be met. [If mandatory abatement trigger levels have not yet been established for the facility, the operator shall prepare and submit the abatement plan when the groundwater assessment plan shows one of the following:**

(i) The presence of groundwater degradation for one or more contaminants at one or more monitoring points at a level that exceeds the groundwater parameter for those contaminants, or, if background water quality exceeds the groundwater parameter, degradation that exceeds background for those contaminants.

(ii) Groundwater degradation at the property boundary.]

(2) Monitoring by the Department or operator shows the presence of **[groundwater degradation] an abatement standard exceedance** for one or more contaminants from one or more **[monitoring] compliance** points **[at a level that exceeds the mandatory abatement trigger level for the contaminant at the monitoring point,] as indicated in subsection (c)** even if a groundwater assessment plan has not been completed. **[If mandatory abatement trigger levels have not yet been established by the Department in the permit for the facility, the mandatory abatement trigger level shall be groundwater degradation for one or more contaminants at one or more monitoring points that exceeds the groundwater parameter for those contaminants or groundwater degradation at the property boundary based on monitoring by the Department or the operator. If the background level for a contaminant is higher than the groundwater parameter for the contaminant, the mandatory abatement trigger level shall be the background level for the contaminant at the monitoring point.]** The operator is not required to implement an abatement plan under this paragraph if the following apply:

(i) Within 10 days after receipt of sample results showing an exceedance of **[the mandatory abatement trigger levels described in this paragraph] an abatement standard at a point of compliance described in subsection (c)**, the operator resamples the affected wells.

(ii) Analysis from resampling shows to the Department's satisfaction that **[the mandatory abatement trigger levels described in this paragraph have not been exceeded] an exceedance of an abatement standard has not occurred.**

[(b) In addition to subsection (a), the Department may require the operator of a residual waste disposal impoundment to prepare and submit to the Department an abatement plan when one of the following occurs:

(1) The groundwater assessment plan prepared and implemented under § 289.266 confirms the presence of groundwater degradation at one or more monitoring points.

(2) Monitoring by the Department or the operator shows the presence of groundwater degradation from one or more monitoring points, even if a groundwater assessment plan has not been completed.

(3) The Department has reason to believe that the operator is responsible for groundwater degradation.

(c)] (b) ***

* * * * *

(c) If abatement is required in accordance with subsection (a), the operator shall demonstrate compliance with one or more of the following standards at the identified compliance points:

(1) For constituents for which a Statewide health standards exists, the Statewide health standard for that constituent at and beyond 150 meters of the perimeter of the permitted disposal area or at and beyond the property boundary, whichever is closer.

(2) The background standard for constituents at and beyond 150 meters of the perimeter of the permitted disposal area or at and beyond the property boundary, whichever is closer.

(3) For constituents for which no primary MCLs under the Federal and Safe Drinking Water Acts (42 U.S.C.A. §§ 300f—300j-18 and 35 P. S. §§ 721.1—721.17) exist, the risk-based standard at and beyond the property boundary, whichever is closer, if the following conditions are met:

(i) The risk assessment used to establish the standard assumes that human receptors exist at the property boundary.

(ii) The level is derived in a manner consistent with Department guidelines for assessment the health risks of environmental pollution.

(iii) The level is based on scientifically valid studies conducted in accordance with the *Good Laboratory Practice Standards* promulgated under the Toxic Substances Control Act (15 U.S.C.A. §§ 2601—

2692) (40 CFR Part 792) or other scientifically valid studies approved by the Department.

(iv) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level of 1 × 10-5 at the property boundary.

(d) For measuring compliance with secondary contaminants under subsection (c)(1) or (3), the Department may approve a compliance point beyond 150 meters on land owned by the owner or the disposal area.

[(d)] (e) ***

[(e) The Department will consider the following factors in its review of the abatement plan:

(1) Whether the operator can restore the groundwater quality to background levels.

(2) Whether the operator has demonstrated that it is technologically impossible or infeasible to restore the groundwater quality to background levels.

(3) Whether the use of the chosen feasible technology will achieve remediation as close to background levels as possible.

(4) Whether the groundwater remediation for unpermitted facilities existing prior to July 4, 1992, and for facilities permitted after July 4, 1992, including facility expansions, will achieve at least human health and environmental protection levels.

(5) Whether the groundwater remediation for facilities permitted prior to July 4, 1992, will achieve levels that are at least equivalent to the groundwater parameters.

(6) Whether the methods or techniques proposed will cause more environmental harm than the contaminants.

(f) For facilities permitted prior to July 4, 1992, the Department may approve a change in the groundwater parameter which is based on IRIS for a contaminant if the operator makes a clear and convincing demonstration to the Department that new studies not yet considered by the EPA IRIS more accurately reflect the human health and environmental effects of a contaminant than IRIS.]

[(g)] (f) ***

[(h)] (g) ***

[(i)] (h) ***

* * * * *

MINERAL AND GAS

§ 289.281. Mineral resources.

(a) The operator shall isolate coal seams, **[and]** coal outcrops **and coal refuse** from combustible waste deposits **[by barriers of natural and compacted soil that are at least 25 feet thick.] in a manner that prevents the combustion of the waste and that prevents damage to the liner system.**

* * * * *

§ 289.282. Gas control and monitoring.

* * * * *

(e) Combustible gas levels may not equal or exceed:

* * * * *

[(3) Twenty-five percent of the lower explosive limit in an adjacent area, including buildings or structures on the adjacent area.]

* * * * *

EMERGENCY PROCEDURES

§ 289.291. Hazard prevention.

[(a)] ***

[(b) First aid facilities shall be available and job safety shall be practiced.]

§ 289.292. Emergency equipment.

(a) Except as provided in subsection (b), the operator shall have available in proper working condition the following equipment at the immediate operating area of the facility:

* * * * *

(3) Portable fire extinguishers, fire control equipment, spill control equipment, self-contained breathing apparatus and decontamination equipment. **For fire control equipment requiring water, the facility shall have a water supply of adequate quantity and pressure to supply the equipment.**

* * * * *

RECORDKEEPING AND REPORTING

§ 289.301. Daily operational records.

(a) The operator of a facility shall make and maintain an operational record for each day that residual waste is received, processed or disposed, and each day that construction, monitoring or postclosure activity occurs. **The operator of a captive residual waste facility may maintain a monthly operational record instead of a daily operational record for each month in which residual waste is received, processed or disposed, and each month that construction, monitoring or postclosure activity occurs. The monthly operational record shall contain the information required in subsection (b)(1)—(6).**

(b) The **[daily]** operational record shall include the following:

* * * * *

(7) For noncaptive facilities, the following:

* * * * *

(iii) An analysis of the quality and quantity of leachate flowing from the impoundment into the leachate storage and treatment systems.

* * * * *

(d) Daily **and monthly** operational records shall be retained for the life of the facility bond, or longer if determined by the Department to be necessary to meet the standards of the environmental protection acts. These records shall be made available to the Department upon request.

§ 289.302. **[Quarterly operation report] (Reserved).**

[(a) An operator of a noncaptive facility shall submit to the Department a quarterly report. The report shall be submitted on or before the 20th day

of April, July, October and January for the 3 months ending the last day of March, June, September and December. The report shall be submitted on forms supplied by the Department.

(b) The quarterly operational report shall include the following:

(1) The type and weight or volume of solid waste received in each month of the reported quarter.

(2) The name, mailing address, county and state of each generator.

(3) For lined facilities, an analysis of the quality and quantity of leachate flowing from the landfill into the leachate storage and treatment system.]

§ 289.303. Annual operation report.

* * * * *

(b) The annual operation report, which shall be submitted on a form supplied by the Department, shall include the following information:

(1) The weight or volume of each type of solid waste received. **For noncaptive facilities, the report shall include the average daily volume totals computed in accordance with § 289.229 (relating to daily volume).**

* * * * *

(c) The annual operation report shall be accompanied by a nonrefundable annual permit administration fee of **[$2,500] $4,600** in the form of a check payable to the "Commonwealth of Pennsylvania."

* * * * *

CLOSURE PROVISIONS

§ 289.312. Closure.

* * * * *

(b) At least 180 days before **implementation of a** closure **[or partial closure] plan**, the operator shall review its approved closure plan to determine whether the plan requires modification, and shall submit proposed changes to the Department for approval under § 287.222 (relating to permit modification).

(c) If groundwater degradation exists at closure or occurs after closure, a person shall meet one of the following:

(1) Continue to implement an approved abatement plan.

(2) Submit an application for a closure plan modification in accordance with the procedures for a major permit modification. The operator shall select one or more remediation standards that will be met in accordance with the final closure certification requirements in § 287.342 (relating to final closure certification). The Department will accept the operator's selection of remediation standards if the requirements of subsection (d) are met.

(d) An application for a clossure plan modification shall include the following:

(1) Technical information and supporting documentation identifying the remediation activities that will be conducted to meet and maintain the remediation standards.

(2) If a remedy relies on access to or use of properties owned by third parties, for remediation or monitoring, documentation of cooperation or agreement.

Subchapter D. ADDITIONAL REQUIREMENTS FOR CLASS I RESIDUAL WASTE DISPOSAL IMPOUNDMENTS

ADDITIONAL APPLICATION REQUIREMENTS

§ 289.412. Liner system and leachate control plan.

* * * * *

(c) The application shall demonstrate that leachate will not adversely affect the physical or chemical characteristics of the proposed liner system, or inhibit the liner's ability to restrict the flow of solid waste, solid waste constituents or leachate, based on **[the most recent edition of EPA Method 9090 (Compatibility Test for Wastes and Membrane Liners), or other documented data. The most recent edition of EPA Method 9090 may obtained from the Department or from the National Technical Information Service (NTIS), United States Department of Commerce, Springfield, VA. 22161] EPA or ASTM Guidelines approved by the Department**.

(d) The application shall include a complete description of the physical, chemical, mechanical and thermal properties for the proposed primary and secondary liners, based on ASTM methods when appropriate. Except to the extent that the Department waives, in writing, one or more of the following for nonsynthetic secondary liners, these properties shall include, at a minimum:

* * * * *

(19) Percent recycled material.

ADDITIONAL OPERATING REQUIREMENTS—GENERAL PROVISIONS

§ 289.422. Areas where Class I residual waste disposal impoundments are prohibited.

(a) Except for areas that were permitted prior to July 4, 1992, Class I residual waste disposal impoundments may not be operated:

* * * * *

(4) In **[coal bearing]** areas underlain by recoverable or mineable **[coals] minerals**, unless the operator of the facility demonstrates and the Department finds, in writing, that the operator owns the underlying **[coal] minerals. This requirement does not apply to the expansion of captive facilities permitted prior to July 4, 1992.**

* * * * *

(7) **[Within] If occupied dwellings are nearby, the following apply:**

(i) For a residual waste disposal impoundment permit issued prior to _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), or for an expansion of a residual waste disposal impoundment permitted prior to _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), or for a captive residual waste disposal impoundment within 300 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the facility being closer than 300

feet. **[Except for facilities permitted prior to July 4, 1992, the] The** disposal area of a residual waste landfill may not be within 500 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the disposal area being closer than 500 feet. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

(ii) For a residual waste disposal impoundment, except for a captive residual waste disposal impoundment, permit issued on or after _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), within 300 yards measured horizontally from an occupied dwelling, unless the owner of the dwelling has provided a written waiver consenting to the facility being closer than 300 yards. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

* * * * *

(10) **[Within 25 feet of a coal seam, coal outcrop or coal refuse, unless the applicant demonstrates that the waste is noncombustible.**

(11)] ***

* * * * *

[(12)] (11) If the facility receives or proposes to receive putrescible waste:

(i) Within 10,000 feet—or 3,048 meters—of an airport runway **[that is or will be] end** used by **[turbine-powered] turbojet** aircraft during the life of disposal operations under the permit **unless the operator can demonstrate that the impoundment is designed and operated so that the impoundment does not pose a bird hazard to aircraft.**

(ii) Within 5,000 feet—or 1,524 meters—of an airport runway **[that is or will be] end** used by piston-type aircraft during the life of disposal operations under the permit **unless the operator can demonstrate that the impoundment is designed and operated so that the impoundment does not pose a bird hazard to aircraft.**

(iii) For purposes of this subsection:

(A) *Airport* means a public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

(B) *Bird hazard* means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.

(12) If a school, park or playground is nearby, the following apply:

(i) Except for an expansion of a noncaptive residual waste disposal impoundment permit issued prior to _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), for a noncaptive residual waste disposal impoundment permit issued on or after _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), within 300 yards of the following:

(A) A building which is owned by a school district or school and used for instructional purposes.

(B) A park.

(C) A playground.

(ii) The current property owner of a school building, park or playground may waive the 300-yard prohibition by signing a written waiver. Upon receipt of the waiver, the Department will waive the 300-yard prohibition and will not use the prohibition as the basis for the denial of a new permit.

* * * * *

§ 289.423. Minimum requirements for acceptable waste.

(a) A person or municipality may not dispose of residual waste at a Class I residual waste disposal impoundment unless the waste meets the following criteria:

* * * * *

(5) The physical characteristics of the waste will not cause or contribute to structural instability or other operating problems at the site.

* * * * *

ADDITIONAL OPERATING REQUIREMENTS—LINER SYSTEM

§ 289.432. General limitations.

(a) **[At least 4 feet shall be maintained between the top] The bottom** of the subbase of the liner system **[and] cannot be in contact with** the seasonal high water table or perched water table without the use of groundwater pumping systems.

* * * * *

(2) Drainage systems may be utilized to **[maintain a 4 foot isolation distance] prevent contact** between the **[top] bottom** of the subbase of the liner system and the seasonal high water table or perched water table. The operator may not use a drainage system if the system is likely to adversely affect the quality **[of] or** quantity of water provided by a public or private water supply, even if a replacement supply is available under § 289.255 (relating to water supply replacement). The drainage system shall be limited to drain tile, piping, french drains or equivalent methods.

(b) For unconfined aquifers, at least 8 feet shall be maintained between the **[top] bottom** of the subbase of the liner system and the regional groundwater table. The regional groundwater table may not be artificially lowered.

(c) For confined aquifers, at least 8 feet shall be maintained between the **[top] bottom** of the subbase of the liner system and the top of the confining layer or the shallowest level below the bottom of the subbase where groundwater occurs as a result of leakage from natural or other **[pre-existing] preexisting** causes. The integrity of the confining layer may not be compromised by excavation.

* * * * *

§ 289.433. Subbase.

* * * * *

(b) Unless alternative design requirements to meet the performance standards in subsection (a) are approved as

part of the permit under § 287.231 (relating to equivalency review procedure), the subbase shall meet the following design requirements. The subbase shall:

* * * * *

[(2) Have a minimum bearing capacity of 4,500 pounds per square foot plus the total applied load in pounds per square foot.

(3)] (2) ***

§ 289.434. Secondary liner.

* * * * *

(b) *Design requirements*. Unless alternative design requirements to meet the performance standards in subsection (a) as part of the permit under § 287.231 (relating to equivalency review procedure) are approved, the secondary liner shall meet, **at the minimum**, the requirements of Appendix A, Table I (relating to minimum liner design standards).

* * * * *

§ 289.435. Leachate detection zone.

* * * * *

(b) Unless alternative design requirements to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the leachate detection zone of a liner system shall meet the following design requirements. The leachate detection zone shall:

* * * * *

(5) The piping system shall also meet the following requirements:

* * * * *

(ii) **[The distance between pipes in the piping system may not exceed 100 feet on center.**

(iii)] ***

[(iv)] (iii) ***

[(v)] (iv) ***

* * * * *

(f) If sampling results indicate the presence of constituents at concentrations that could result in **[exceedance of mandatory abatement trigger levels for the facility] groundwater degradation at a monitoring well,** the operator shall:

(1) Submit a remedial plan for controlling the source of leachate in the leachate detection zone **and correcting a malfunction or defect in the liner system,** and implement the plan upon Department approval.

* * * * *

§ 289.436. Primary liner.

* * * * *

(b) *Design requirements*. Unless alternative design standards to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the primary liner shall meet**, at the minimum,** the requirements of Appendix A, Table I (relating to minimum liner design standards).

* * * * *

ADDITIONAL OPERATING REQUIREMENTS—LEACHATE TREATMENT

§ 289.454. Leachate recirculation.

(a) ***

(b) An alternate leachate recirculation method may be used if approved by the Department.

§ 289.455. Leachate collection and storage.

* * * * *

(b) An onsite leachate storage system shall be part of each leachate treatment method used by the operator. The storage system shall contain impoundments or tanks for storage of leachate. **[The] For noncaptive facilities, the** tanks or impoundments shall have a storage capacity at least equal to the maximum expected production of leachate for a 30-day period for the life of the facility estimated under § 289.413 (relating to leachate treatment plan). **For captive facilities, the tank or impoundment shall have sufficient storage capacity to ensure proper operation of the treatment facility in accordance with the approved leachate treatment plan, shall meet the performance standard in § 289.438(a)(1) (relating to leachate collection system within protective cover) and shall comply with The Clean Streams Law.** No more than 25% of the total leachate storage capacity may be used for flow equalization on a regular basis.

* * * * *

(d) The storage capacity of impoundments and tanks at a site shall be increased**, if additional storage is required,** prior to each major phase of construction and as otherwise necessary.

* * * * *

(g) All underground pipes used for the transport of leachate from the liner system to the leachate storage impoundments or tanks shall be equipped with secondary containment. The secondary containment shall be designed, constructed and installed to direct any release to an area that can be inspected for leaks.

§ 289.456. Leachate analysis and sludge handling.

(a) Upon commencement of leachate flow from the facility, the operator shall sample, analyze and maintain a record of the following:

* * * * *

(2) On a quarterly basis unless otherwise provided in the permit, the chemical composition of leachate flowing into the leachate treatment system. The analysis shall be sufficient to determine the impact of leachate on the liner system, the effectiveness of the leachate treatment system, the need for modification of the groundwater monitoring system or the effluent limitations in an NPDES permit and the actual characteristics of leachate from the waste disposed at the facility. For the purpose of this analysis, the leachate sample shall be collected from the influent storage tank or impoundment and shall be representative of the average mixed influent leachate quality. **The Department may modify the frequency of chemical analysis or not require certain constituents to be tested following four consecutive quarters of analysis if the operator demonstrates that modifying the frequency of chemical analysis will not compromise groundwater protection.**

* * * * *

Subchapter E. ADDITIONAL REQUIREMENTS FOR CLASS II RESIDUAL WASTE DISPOSAL IMPOUNDMENTS

ADDITIONAL APPLICATION REQUIREMENTS

§ 289.512. Liner system and leachate control plan.

* * * * *

(c) The application shall demonstrate that leachate will not adversely affect the physical or chemical characteristics of the proposed liner system, or inhibit the liner's ability to restrict the flow of solid waste, solid waste constituents or leachate based on **[the most recent edition of EPA Method 9090, (Compatibility Test for Wastes and Membrane Liners) or other documented data. The most recent edition of EPA Method 9090 can be obtained from the Department or from the National Technical Information Service (NTIS), United States Department of Commerce, Springfield, VA 22161] EPA or ASTM Guidelines approved by the Department.**

(d) The application shall include a complete description of the physical, chemical, mechanical and thermal properties for the proposed liner, based on ASTM methods when appropriate. These properties shall include, at a minimum:

* * * * *

(19) Percent recycled material.

ADDITIONAL OPERATING REQUIREMENTS—GENERAL

§ 289.522. Areas where Class II residual waste disposal impoundments are prohibited.

(a) Except for areas that were permitted prior to July 4, 1992**[.],** Class II residual waste disposal impoundments may not be operated as follows:

* * * * *

(4) In **[coal bearing]** areas underlain by recoverable or mineable **[coals] minerals**, unless the operator of the facility demonstrates and the Department finds, in writing, that the operator owns the underlying **[coal] minerals. This requirement does not apply to the expansion of captive facilities permitted prior to July 4, 1992.**

* * * * *

(7) **[Within] If occupied dwellings are nearby, the following apply:**

(i) For a residual waste disposal impoundment permit issued prior to _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), or for an expansion of a residual waste disposal impoundment permitted prior to _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), or for a captive residual waste disposal impoundment within 300 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the facility being closer than 300 feet. **[Except for facilities permitted prior to July 4, 1992, the] The** disposal area of a residual waste landfill may not be within 500 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the disposal area being closer than 500 feet. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

(ii) For a residual waste disposal impoundment, except for a captive residual waste disposal impoundment, permit issued on or after _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), within 300 yards measured horizontally from an occupied dwelling, unless the owner of the dwelling has provided a written waiver consenting to the facility being closer than 300 yards. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

* * * * *

(10) **[Within 25 feet of a coal seam, coal outcrop or coal refuse, unless the applicant demonstrates that the waste is noncombustible.**

(11)] ***

* * * * *

[(12)] (11) If the facility receives or proposes to receive putrescible waste:

(i) Within 10,000 feet—or 3,048 meters—of an airport runway **[that is or will be] end** used by **[turbine-powered] turbojet** aircraft during the life of disposal operations under the permit **unless the operator can demonstrate that the impoundment is designed and operated so that the impoundment does not pose a bird hazard to aircraft.**

(ii) Within 5,000 feet—or 1,524 meters—of an airport runway **[that is or will be] end** used by piston-type aircraft during the life of disposal operations under the permit **unless the operator can demonstrate that the impoundment is designed and operated so that the impoundment does not pose a bird hazard to aircraft.**

(iii) For purposes of this subsection:

(A) "Airport" means public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

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

(12) If a school, park or playground is nearby, the following apply:

(i) Except for an expansion of a noncaptive residual waste disposal impoundment permit issued prior to _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), for a noncaptive residual waste disposal impoundment permit issued on or after _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), within 300 yards of the following:

(A) A building which is owned by a school district or school and used for instructional purposes.

(B) A park.

(C) A playground.

(ii) The current property owner of a school building, park or playground may waive the 300-yard prohibition by signing a written waiver. Upon re-

ceipt of the waiver, the Department will waive the 300-yard prohibition and will not use the prohibition as the basis for the denial of a new permit.

(b) The Department may waive or modify one or more of the isolation distances in subsection (a)(1), (5), (7), (8) and (11) for expansions of captive facilities if the operator of the captive facility demonstrates the following to the Department's satisfaction:

[(i)] (1) ***

[(ii)] (2) ***

[(iii)] (3) ***

[(iv)] (4) ***

[(v)] (5) ***

[(vi)] (6) ***

* * * * *

§ 289.523. Minimum requirements for acceptable waste.

(a) A person or municipality may not dispose of residual waste at a Class II residual waste disposal impoundment unless the waste meets the following criteria:

(1) The residual waste may not be of a type from which the maximum concentration obtained for a contaminant, based on a chemical analysis of its leachate submitted under § 287.132 (relating to chemical analysis of waste), and approved by the Department, exceeds 50 times the **[drinking water standard] waste classification standard** for that contaminant. If analytical quantitation limits prevent determination of the acceptability of a residual waste under this paragraph, the Department may consider the total analysis of the waste as well as the physical and chemical characteristics of the contaminant in making a determination of acceptability of the waste at the facility.

(2) Notwithstanding the limitation in paragraph (1), the Department may authorize the disposal of residual waste at a monofill if the waste is of a type from which the maximum concentration obtained for a contaminant, based on a chemical analysis of its leachate submitted under § 287.132, exceeds 50 times the SMCL for that contaminant if the SMCL is the **[groundwater parameter] waste classification standard** for the contaminant. The Department may authorize the disposal of the waste only upon a demonstration that disposal of the waste at the facility will not cause groundwater degradation that exceeds the SMCL for a contaminant at a monitoring point or groundwater degradation that exceeds background levels at the property boundary for the contaminant.

* * * * *

(4) The Department may authorize a facility which disposes of a waste in accordance with a permit under this article to continue to dispose of the waste at the facility although a **[groundwater parameter] waste classification standard** for a contaminant has been changed so that the waste would no longer meet the criteria for disposal of the waste at the facility under paragraph (1), if the operator of the facility demonstrates to the Department's satisfaction that disposal of the waste will not cause groundwater degradation that exceeds the **[groundwater parameter] waste classification standard** for a contaminant at a monitoring point or groundwater degradation that exceeds background levels at the property boundary for a contaminant.

* * * * *

(11) The physical characteristics of the waste will not cause or contribute to structural instability or other operating problems at the site.

* * * * *

ADDITIONAL OPERATING REQUIREMENTS—LINER SYSTEM

§ 289.532. General limitations.

(a) **[At least 4 feet shall be maintained between the top] The bottom** of the subbase of the liner system **[and] cannot be in contact with** the seasonal high table or perched water table without the use of groundwater pumping systems.

* * * * *

(2) Drainage systems may be utilized to **[maintain a 4-foot isolation distance] prevent contact** between the **[top] bottom** of the subbase of the liner system and the seasonal high water table or perched water table. The operator may not use a drainage system if the system is likely to adversely affect the quality or quantity of water provided by a public or private water supply, even if a replacement supply is available under § 289.255 (relating to water supply replacement). The drainage system shall be limited to drain tile, piping, french drains or equivalent methods.

(b) For unconfined aquifers, at least 8 feet shall be maintained between the **[top] bottom** of the subbase of the liner system and the regional groundwater table. The regional groundwater table may not be artificially lowered.

(c) For confined aquifers, at least 8 feet shall be maintained between the **[top] bottom** of the subbase of the liner system and the top of the confining layer or the shallowest level below the bottom of the subbase where groundwater occurs as a result of leakage from natural or other preexisting causes. The integrity of the confining layer may not be compromised by excavation.

* * * * *

§ 289.534. Leachate detection zone.

* * * * *

(b) Unless alternative design requirements to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the leachate detection zone of a liner system shall meet the following design requirements. The leachate detection zone shall:

* * * * *

(4) Contain a perforated piping system capable of detecting and intercepting liquid within the leachate detection zone and conveying the liquid to a collection sump for storage, processing or disposal. The sump shall be separate from the leachate collection sump and shall be of a sufficient size to transmit leachate that is generated. The piping system shall also meet the following requirements:

* * * * *

(ii) **[The distance between pipes in the piping system may not exceed 100 feet on center.**

(iii)] ***

[(iv)] (iii) ***

[(v)] (iv) ***

* * * * *

(f) If sampling results indicate the presence of constituents at concentrations that could result in **[exceedance of mandatory abatement trigger levels for the facility] groundwater degradation**, the operator shall submit the following to the Department:

(1) A remedial plan for controlling the source of leachate in the leachate detection zone **and correcting a malfunction or defect in that liner system,** and implement the plan upon Department approval.

* * * * *

§ 289.535. Liner.

* * * * *

(b) *Alternative design requirements*. Unless alternative design requirements to meet the performance standards in subsection (a) are approved as part of the permit under § 287.231 (relating to equivalency review procedure), the liner shall meet**, at the minimum,** the requirements of Appendix A, Table II (relating to minimum liner design standards).

* * * * *

ADDITIONAL OPERATING REQUIREMENTS—LEACHATE TREATMENT

§ 289.554. Leachate recirculation.

(a) ***

* * * * *

(b) An alternate leachate recirculation method may be used if approved by the Department.

§ 289.555. Leachate collection and storage.

* * * * *

(b) An onsite leachate storage system shall be part of each leachate treatment method used by the operator. The storage system shall contain impoundments or tanks for storage of leachate. **[The] For noncaptive facilities, the** tanks or impoundments shall have a storage capacity at least equal to the maximum expected production of leachate for a 30-day period for the life of the facility estimated under § 289.513 (relating to leachate treatment plan). **For captive facilities, the tank or impoundment shall have sufficient storage capacity to ensure proper operation of the treatment facility in accordance with the approved leachate treatment plan, shall meet the performance standards in § 289.537(a)(1) (relating to leachate collection system within protective cover) and shall comply with The Clean Streams Law.** No more than 25% of the total leachate storage capacity may be used for flow equalization on a regular basis.

* * * * *

(d) The storage capacity of impoundments and tanks at a site shall be increased**, if additional storage is required,** prior to each major phase of construction and as otherwise necessary.

* * * * *

(g) All underground pipes used for the transport of leachate from the liner system to the leachate storage impoundments or tanks shall be equipped with secondary containment. The secondary containment shall be designed, constructed and installed to direct any release to an area that can be inspected for leaks.

§ 289.556. Leachate analysis and sludge handling.

(a) Upon commencement of leachate flow from the facility, the operator shall sample, analyze and maintain a record of the following:

* * * * *

(2) On a quarterly basis, unless otherwise specified in the permit, the chemical composition of leachate flowing into the leachate treatment system. The analysis shall be sufficient to determine the impact of leachate on the liner system, the effectiveness of the leachate treatment system, the need for modification of the groundwater monitoring system or the effluent limitations in an NPDES permit, and the actual characteristics of leachate from the waste disposed at the facility. For the purpose of the analysis, the leachate sample shall be collected from the influent storage tank or impoundment and shall be representative of the average mixed influent quality. **The Department may modify the frequency of chemical analysis or not require certain constituents to be tested following four consecutive quarters of analysis if the operator demonstrates that modifying the frequency of chemical anaylsis will not compromise groundwater protection.**

* * * * *

APPENDIX A
TABLE I
MINIMUM LINER DESIGN STANDARDS

LINER MATERIAL	*FUNCTION*	*MINIMUM FIELD THICKNESS (UNITS AS SPECIFIED)*	*LINER DENSITY (TESTS AS SPECIFIED)*	*REMARKS*
Geomembranes	Primary **or Secondary** Liner	**[50] 30** mil	N/A	1. A greater thickness may be required depending upon the recommendations of the manufacturer. **HDPE liners shall be at least 60 mil**.
Geomembranes	**[Secondary Liner,]** Cap	**[50] 30** mil **[40 mil]**	N/A	1. A greater thickness may be required depending upon the recommendations of the manufacturer.

Natural & Remolded Clay	Secondary Liner, Cap, Composite Component	2 feet 2 feet 1 foot	≥90%* ≥90%* ≥90%*	1. Minimum of 30% fines by weight less than 0.074 mm particle size (#200 sieve). 2. Plasticity Index greater than or equal to 10. 3. No coarse fragments greater than 3/4 inch in diameter.
Sodium bentonite & Bentonite-like materials/soil mixtures	Secondary Liner, Cap, Composite Component	2 feet 2 feet 1 foot	≥90%* ≥90%* ≥90%*	1. Minimum of 8% powdered sodium bentonite or manufacturer's recommendations, whichever is greater. 2. No coarse fragments greater than 3/4 inch in diameter. 3. No organic matter. 4. Coarse fragment content (those materials greater than 4.76 mm. in diameter) shall not exceed 10% by weight.
[Prefabricated Clay Mats] Geosynthetic clay liner (GCL)	Composite Component	**[1/4 inch] N/A**	N/A	1. Minimum of **[one] 3/4** pound of powdered **or granular** sodium bentonite per square foot.

* Percentage of maximum when using Standard Proctor method of design (Pa. PTM No. 106, Method B).

TABLE II
MINIMUM LINER DESIGN STANDARDS

LINER MATERIAL	*FUNCTION*	*MINIMUM FIELD THICKNESS (UNITS AS SPECIFIED)*	*LINER DENSITY (TESTS AS SPECIFIED)*	*REMARKS*
Geomembranes	Liner Cap	**[50] 30** mil **[40 mil]**	N/A	1. A greater thickness may be required depending upon the recommendations of the manufacturer. **HDPE liners shall be at least 60 mil.**
Natural & Remolded Clay	Cap, Composite Component	2 feet 1 foot	≥90%* ≥90%*	1. Minimum of 30% fines by weight less than 0.074 mm particle size (#200 sieve). 2. Plasticity Index greater than or equal to 10. 3. No coarse fragments greater than 3/4 inch in diameter.
Sodium bentonite & Bentonite-like materials/soil mixtures	Cap, Composite Component	2 feet 1 foot	≥90%* ≥90%*	1.Minimum of 8% powdered sodium bentonite or manufacturer's recommendations, whichever is greater. 2. No coarse fragments greater than 3/4 inch in diameter. 3. No organic matter. 4. Coarse fragment content (those materials greater than 4.76 mm. in diameter), shall not exceed 10% by weight.
[Prefabricated Clay Mats] Geosynthetic clay liner (GCL)	Composite Component	**[1/4 inch] N/A**	N/A	1. Minimum of **[one] 3/4** pound of powdered **or granular** sodium bentonite per square foot.

* Percentage of maximum when using Standard Proctor method of design (Pa. PTM No. 106, Method B).

CHAPTER 291. LAND APPLICATION OF RESIDUAL WASTE

Subchapter B. GENERAL APPLICATION REQUIREMENTS FOR THE LAND APPLICATION OF RESIDUAL WASTE

§ 291.101. General.

(a) An application for the land application of residual waste shall:

* * * * *

(4) Be considered an application for **[surface land disposal unless the applicant demonstrates to the Department that the residual waste will be applied for]** agricultural utilization or land reclamation.

* * * * *

§ 291.102. Operating plan.

An application shall contain a narrative description explaining the following:

(1) Whether the proposed operation is for agricultural utilization**[,] or** land reclamation **[or surface land disposal]** of residual waste.

* * * * *

§ 291.103. Maps and related information.

(a) An application shall contain a topographic map on a scale in which 1 inch equals no more than 400 feet, including necessary narrative descriptions, which show the following:

* * * * *

(5) The location and name of public and private water **[supplies] sources** and wells within the isolation distances set forth in § 291.202 (relating to areas where the land application of residual waste is prohibited).

* * * * *

(8) **[For surface land disposal sites, the location of the permanent physical markers for the grid coordinate system.**

(9)] (8) ***

* * * * *

Subchapter C. GENERAL OPERATING REQUIREMENTS FOR THE LAND APPLICATION OF RESIDUAL WASTE

GENERAL

§ 291.201. General provisions.

* * * * *

(b) A person or municipality that owns or operates a land application facility for residual waste shall comply with the following:

(1) The requirements of the act, this subchapter and the additional operating requirements for the specific type of operation that are in Subchapter D**[,] or** E **[or F]** (relating to additional requirements for the agricultural utilization of residual waste; **and** additional requirements for land reclamation **[; and additional requirements for the surface land disposal of residual waste]**).

* * * * *

(3) The Department guidelines for **[agricultural utilization, unless the person or municipality is operating under a permit that allows use of the loading rate guidelines for land reclamation or surface land disposal, in which case the person or municipality shall comply with the applicable guidelines for the operation] land application**.

(4) If the residual waste contains human waste, and exceeds the pathogen and vector attraction reduction requirements in § 271.911(b) (relating to exceptional quality sewage sludge), the residual waste land application operation shall comply with the operating requirements of this chapter and Chapter 271, Subchapter J (relating to beneficial use).

* * * * *

(d) Residual waste may not be applied to the land if it is likely to adversely affect a Federal or Pennsylvania threatened or endangered species, or its designated critical habitat, listed under or under section 4 of the Endangered Species Act (16 U.S.C.A. § 1533), section 2305 of the Fish and Boat Code, 30 Pa.C.S. § 2305, or the Game and Wildlife Code, 34 Pa.C.S.

(e) Residual waste may not be applied to a site that is flooded, frozen, or snow-covered, except as expressly provided in the permit.

§ 291.202. Areas where the land application of residual waste is prohibited.

(a) Except for areas permitted by the Department prior to the effective date of these regulations, the land application of residual waste may not be conducted as follows:

* * * * *

(2) Within 300 feet of a water source unless **[otherwise approved by the Department, in writing] the current owner of this water source has provided a written waiver consenting to the activities closer than 300 feet. This paragraph does not apply to features that may come into existence after the dates upon which adjacent landowner notification is given under § 287.151(b) (relating to public notice by applicant).**

[(3) Within 1,000 feet upgradient of a surface water source unless otherwise approved by the Department, in writing.

(4) Within 25 feet of a bedrock outcrop.

(5) Within 50 feet of a property line within which the residual waste is applied, unless the owner has provided a written consent to the land application being closer than 50 feet. The waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

(6)] (3) Within 100 feet of a sinkhole **[or area draining into a sinkhole.**

(7) Within 25 feet of the perimeter of an undrained depression.

(8)] (4) ***

[(9)] (5) ***

[(10) For the surface land disposal of residual waste, within the 100-year floodplain of waters of this Commonwealth.]

* * * * *

§ 291.203. Limitations on land application of residual waste.

(a) Residual waste may not be applied to land where the regional groundwater table is less than **[four]** **3.3** feet from the surface.

* * * * *

(d) Unless otherwise approved by the Department in writing, residual waste may not be applied to land where **[:**

(1) Root] **root** vegetables or vegetables which are eaten raw are grown or will be grown **[within 2 years]**.

[(2) Tobacco is grown or will be grown.]

* * * * *

(g) Livestock may not be allowed to graze **[for at least 2 months after the application of residual waste] on areas where the residual waste is visible on the vegetation or the surface of the ground**, unless otherwise approved by the Department in writing.

§ 291.205. Erosion control.

* * * * *

(c) For agricultural utilization **[and surface land disposal]**, rills and gullies shall be filled, graded or otherwise stabilized and, when necessary, the area reseeded or replanted, when rills or gullies deeper than 3 inches form in areas where residual waste has been applied or stored.

* * * * *

§ 291.207. Water supply replacement.

(a) An operator which adversely affects a water supply **by degradation, pollution or other means** shall restore the affected supply at no additional cost to the owner or replace the affected water supply with an alternate source that is of like quantity and quality to the original supply at no additional cost to the owner.

* * * * *

(d) Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply or extension of a private water supply, but do not include provision of bottled water or a water tank supplied by a bulk water hauling system, which are temporary water supplies.

§ 291.209. **[Permit area markers] (Reserved).**

[(a) Permit area markers shall be:

(1) Posted prior to, and maintained for the duration of, land application operations at the site.

(2) Clearly visible, readable and uniform throughout land application operations.

(b) Permit area markers for the surface land disposal of residual waste shall also be permanently fixed and made of a durable material, and shall be maintained through the postclosure care period.]

§ 291.210. Nuisance control.

(a) The operator **[may not cause or allow] shall control and minimize** the attraction, harborage or breeding of vectors.

(b) The operator shall also **[prevent] control** and **[eliminate] minimize** conditions not otherwise prohibited by this subchapter that are harmful to the environment or public health, or which create safety hazards, odors, dust, noise, unsightliness and other public nuisances.

RECORDKEEPING AND REPORTING

§ 291.221. Daily operational records.

* * * * *

(b) The daily operational record shall include the following:

* * * * *

(9) A description of waste handling problems or emergency disposal facilities.

* * * * *

§ 291.222. Annual operation report.

* * * * *

(b) The annual operation report, which shall be submitted on a form supplied by the Department, shall include the following:

* * * * *

(6) For agricultural utilization **[and surface land disposal]** facilities which have received residual waste in the calendar year, a chemical analysis of soil for each field or soil series at the facility for pH, phosphorus, cadmium, zinc, copper, nickel, lead, chromium, mercury and any other constituents contained in the waste that may be leached into the environment, as determined under § 287.132 (relating to chemical analysis of waste), unless otherwise specified by the Department in the permit. The procedure for soil sampling and analysis shall be consistent with the Department guidelines.

(7) **[A written update of the total bond liability for the facility under § 287.331 (relating to bond amount determination), for surface land disposal of residual waste. If additional bond is determined to be necessary, it shall be submitted to the Department within 90 days after the annual report is due.**

(8)] * * *

* * * * *

(d) The annual operation report shall be accompanied by a nonrefundable annual permit administration fee in the form of a check payable to the "Commonwealth of Pennsylvania" for the following amounts:

(1) **[Three] Six** hundred dollars for the agricultural utilization of residual waste.

(2) **[Fifteen] Nineteen** hundred dollars for land reclamation **[and surface land disposal]** of residual waste.

* * * * *

Subchapter D. ADDITIONAL REQUIREMENTS FOR THE AGRICULTURAL UTILIZATION OF RESIDUAL WASTE

ADDITIONAL APPLICATION REQUIREMENTS

§ 291.301. Additional application requirements.

In addition to the requirements of Subchapter B (relating to general application requirements for the land

application of residual waste), an application for a permit for agricultural utilization of residual waste shall include the following:

* * * * *

[(4) If the seasonal high water table is less than 20 inches under § 291.312(3) (relating to site characteristics), the application shall include data published in peer reviewed professional journals demonstrating that the proposed operation will not degrade air, soil, water, vegetation or other natural resources and can be accomplished in a normal farming operation using best agricultural management practices.]

ADDITIONAL OPERATING REQUIREMENTS

§ 291.311. General requirements.

(a) In addition to the requirements of Subchapter C (relating to general operating requirements for the land application of residual waste), a person or municipality that applies residual waste for agricultural utilization shall comply with this section and §§ 291.312—291.316, unless the person or municipality has obtained a permit from the Department for land reclamation **[or surface land disposal]**. In that case, the person or municipality shall comply with the applicable provisions of Subchapter E **[or F]** (relating to additional requirements for land reclamation**[; and additional requirements for the surface land disposal of residual waste]**).

* * * * *

§ 291.312. Site characteristics.

A person or municipality may not apply residual waste to a site unless the site complies with the following:

* * * * *

(2) **[The soils shall have a minimum depth from surface to bedrock of 20 inches.**

(3)] The site shall have a minimum depth from surface to seasonal high water table of **[20] 11** inches. **[The operator may establish this minimum depth through the use of a tile drain system, if approved by the Department in the permit. However, the Department may approve a minimum depth of 12 inches for food processing sludges containing no domestic sewage.**

(4)] (3) Slopes to be utilized for agricultural utilization may not exceed **25%, unless otherwise approved in writing by the Department [15%, except as follows:**

(i) Slopes up to 20% may be approved in the permit for the surface application of residual waste to well established hayfields, pastures and cover crops, or on no-till crops where the previous no-till crop was harvested in a manner that left adequate residue.

(ii) Slopes up to 25% may be approved in the permit for the subsurface injection of residual waste if the following are met:

(A) The residual waste is applied to well established hayfields, pastures and cover crops, or on no-till crops where the previous no-till crop was harvested in a manner that left adequate residue.

(B) The injection unit is capable of uniformly injecting the residual waste beneath the surface on the slope to prevent ponding, runoff and other nuisances.

(5)] (4) Soil pH shall be 6.5 or greater prior to land application, unless the Department allows the operator to increase pH by application of residual waste or other material. **[In that case, soil pH shall be 6.5 or greater within 6 months following the first application of residual waste.**

(6)] (5) Except as provided in paragraph **[(5)] (6),** soil pH shall be maintained at 6.5 or greater for the life of land application operations **[and for 2 additional years following the last application of residual waste to the site].**

[(7)] (6) ***

§ 291.314. **[Weather] (Reserved).**

[(a) A person or municipality may not apply residual waste when the ground is saturated or covered with snow, or during periods of rain.

(b) A person or municipality may not apply residual waste when the ground is frozen, unless the Department has approved the application in the permit and the following conditions exist:

(1) The slopes at the site do not exceed 3.0%.

(2) The site contains sufficient vegetation or a well-established cover crop to prevent runoff of residual waste.

(3) Application of residual waste is consistent with Department guidelines for winter application.

(4) No residual waste storage capacity or other means of storage or disposal exists at the generating facility.]

§ 291.315. Water quality monitoring.

If required by the Department, **based upon the waste and site characteristics**, the operator shall conduct groundwater monitoring **[that meets the requirements of §§ 291.521—291.528 (relating to groundwater monitoring), or another plan for accurately monitoring groundwater that is approved in the permit] and accurately characterize background groundwater quality at the facility.**

§ 291.316. Soil-pore water monitoring.

If required by the Department, **based upon the waste and site characteristics,** the operator shall conduct soil-pore water monitoring **[that meets the requirements of § 291.515 (relating to soil-pore water monitoring), or another plan for accurately monitoring soil-pore water that is approved in the permit] and accurately characterize soil-pore water at the facility.**

Subchapter E. ADDITIONAL REQUIREMENTS FOR LAND RECLAMATION

ADDITIONAL OPERATING REQUIREMENTS

§ 291.412. Site characteristics.

A person or municipality may not apply residual waste under a land reclamation permit unless the site complies with the following:

(1) Slopes to be utilized for residual waste application may not exceed **[20%] 35%, unless otherwise approved in writing by the Department. [The Department may approve slopes of up to 35% in the permit**

if the applicant demonstrates to the Department's satisfaction that the slopes will not cause erosion or offsite runoff.]

* * * * *

(3) Except as provided in paragraph (2), soil pH shall be maintained at 6.5 or greater during the life of application operations **[and for 2 additional years following final residual waste application]**.

§ 291.414. Weather.

(a) The operator may not apply residual waste **[as follows:**

(1) When the ground is saturated, snow covered, frozen or during periods of rain.

(2) Between] between October 15 and April 15.

* * * * *

§ 291.416. Water quality monitoring.

If required by the Department, **based upon waste and site characteristics,** the operator shall conduct groundwater monitoring **[that meets the requirements of §§ 291.521—291.528 (relating to groundwater monitoring), or another plan for accurately monitoring groundwater that is approved in the permit] and accurately characterize groundwater at the facility.**

§ 291.417. Soil-pore water monitoring.

If required by the Department, **based upon waste and site characteristics**, the operator shall conduct soil-pore water monitoring **[that meets the requirements of § 291.515 (relating to soil-pore water monitoring), or another plan for accurately monitoring soil-pore water that is approved in the permit] and accurately characterize soil-pore at the facility.**

Subchapter F. **[ADDITIONAL REQUIREMENTS FOR THE SURFACE LAND DISPOSAL OF RESIDUAL WASTE] (Reserved)**

(*Editor's Note*: The Department is proposing to delete Subchapter F, §§ 291.501—291.503, 291.511—291.517 and 291.521—291.528, *Pennsylvania Code* pages 291-19—291-32 (serial pages (226815)—(226828)).

CHAPTER 293. TRANSFER FACILITIES FOR RESIDUAL WASTE

Subchapter B. APPLICATION REQUIREMENTS FOR TRANSFER FACILITIES

§ 293.1. Scope.

(a) ***

(b) The Department may waive or modify a requirement of this chapter for permitted transfer facilities at which no actual loading, unloading or transferring of residual waste occurs, if the absence of the loading, unloading and transferring activity renders the requirement unnecessary.

§ 293.103. Maps and related information.

(a) An application shall contain a topographic map of the proposed permit area and adjacent area, including necessary narrative descriptions, which shows the following:

* * * * *

(4) The location and name of public and private water **[supplies] sources** that are located on or within **[1/2] 1/4** mile of the proposed facility. If more than 50 wells are located within the **[1/2] 1/4**-mile radius, the applicant may identify only the closest wells in each direction and generally describe the location and number of wells within the **[1/2] 1/4**-mile radius.

* * * * *

(b) **[An application shall also contain a United States Department of Agriculture Soil Conservation Service soils map, or aerial photographs if current soils maps are unavailable, for the proposed permit area and adjacent area showing the site boundaries and soil types.**

(c)] ***

§ 293.104. Plan for access roads.

The application shall contain designs, cross sections and specifications for access roads, including load limits, under § 293.213 (relating to access roads). **Access roads shall be designed and constructed to adequately handle the truck traffic expected at the disposal facility.**

§ 293.106. Soil and groundwater monitoring plan.

(a) If required by the Department, the applicant shall submit a groundwater monitoring plan to detect **[adverse effects on]** groundwater **degradation** from the facility.

* * * * *

§ 293.109. Contingency plan.

An application shall contain a contingency plan consistent with §§ 293.241—293.243 (relating to emergency procedures). The plan shall include a Preparedness, Prevention and Contingency (PPC) Plan that is consistent with the Department's most recent guidelines for the development and implementation of PPC**[s]** plans.

Subchapter C. OPERATING REQUIREMENTS FOR TRANSFER FACILITIES

GENERAL PROVISIONS

§ 293.201. Basic limitations.

* * * * *

(f) All approved mitigation measures identified in the permit application shall be completed before a facility may accept waste unless a later date is authorized in writing by the Department for technical reasons.

§ 293.202. Areas where transfer facilities are prohibited.

(a) Except for areas that were permitted prior to July 4, 1992**[.],** no transfer facility may be operated:

* * * * *

(3) In or within 100 feet of a wetland other than an exceptional value wetland, unless **the storage and processing take place in an enclosed facility and no adverse impacts to the wetland will occur**, storage, processing and disposal will not occur within that distance **or storage and processing take place in an enclosed facility** and one of the following is true:

* * * * *

(5) Within 100 feet of a perennial stream, unless **one of the following applies:**

(i) The storage and **[disposal will not occur within that distance] processing take place in an enclosed facility** and no adverse **[hydrologic or water quality]** impacts **to the perennial stream** will result.

(ii) The facility transfers waste to barges at the transfer facility location.

(6) Within 50 feet of a property line, unless **[the operator demonstrates that actual processing of waste is not occurring within that distance] one of the following applies:**

(i) The storage and processing take place in an enclosed facility.

(ii) The owner of the adjacent property has provided a written waiver consenting to the facility being closer than 50 feet. The waiver shall be knowingly made and separate from a lease or a deed unless the lease or deed contains an explicit waiver from the owner.

(7) If a school, park or playground is nearby, the following apply:

(i) Except for an expansion of a residual waste transfer station permit issued prior to _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), for a residual waste transfer station permit issued on or after _____ *(Editor's Note*: The blank refers to the effective date of adoption of this proposal), within 300 yards of the following:

(A) A building which is owned by a school district or school and used for instructional purposes.

(B) A park.

(C) A playground.

(ii) The current property owner of a school building, park or playground may waive the 300-yard prohibition by signing a written waiver. Upon receipt of the waiver, the Department will waive the 300-yard prohibition and will not use the prohibition as the basis for the denial of a new permit.

* * * * *

DAILY OPERATIONS

§ 293.211. Signs.

(a) A person or municipality that operates a noncaptive transfer facility shall identify the facility for the duration of operations by posting and maintaining a sign which will be clearly visible **and can be easily seen and read** at the junction of each access road and public road **unless otherwise approved by the Department**. The sign shall be constructed of a durable, weather-resistant material **[and shall be of a minimum size of 3 feet by 4 feet with a light background and contrasting letters and numbers of a minimum height of 3 inches that can be easily seen and read. The sign shall show the name, business address and telephone number of the person or municipality that operates the facility, the operating hours of the facility and the number of the current permit authorizing operations at the facility]**.

* * * * *

§ 293.213. Access roads.

* * * * *

(c) An access road shall have a drainage system that is compatible with the natural drainage system, structurally stable, and which will safely conduct the peak flow from a 25-year, 24-hour precipitation event. **[The drainage system shall include sloped or crowned road surfaces, cross drains or culverts, stabilized ditches, erosion resistant surfacing, sediment traps and other appropriate sediment control measures as required by § 293.232 (relating to soil erosion and sedimentation control).] The drainage system shall comply with Chapter 102 (relating to erosion control).**

(d) An access road shall be paved or surfaced with asphalt, gravel, cinders**[,] or other equivalent material approved by the Department in the permit**. An access road shall be capable of withstanding the load limits projected by the applicant under § 293.104 (relating to plan for access roads). The maximum sustained grade of an access road may not exceed 12%.

* * * * *

(h) An access road shall be maintained to control dust and to prevent or control the tracking of mud on and off site.

§ 293.215. Operations and equipment.

* * * * *

(c) **[Standby equipment shall be located on the site or at a place where it can be available within 24 hours.]** If a breakdown of the operator's equipment occurs, the operator shall utilize standby equipment as necessary to comply with the act, the environmental protection acts, this subchapter and its permit conditions.

* * * * *

(e) Equipment **[used to handle putrescible solid waste with which operations personnel are in direct contact shall be cleaned at the end of each working day or every 24 hours. Other equipment]** shall be cleaned at frequencies specified in the permit based on scheduled or emergency maintenance periods.

(f) The operator of a transfer facility shall inspect and monitor incoming waste to ensure that the waste received is consistent with this article and the permit unless otherwise approved by the Department. Monitoring and inspection shall include screening of waste for radioactive isotopes and be consistent with § 287.134 (relating to waste analysis plan).

§ 293.216. Unloading area.

* * * * *

(b) The loading areas and unloading areas shall be constructed of impervious material which is capable of being cleaned by high pressure water spray and shall be equipped with drains or sumps connected to a sanitary sewer system or treatment facility to facilitate the removal of water. Drains or treatment systems may be connected to a sanitary sewer system if a waste characterization is submitted to the sewage treatment plant operator, and the operator finds that the treatment plant can fully treat the waste stream. **Leachate may also be collected in holding tanks prior to its transport to the sewage treatment plant.**

* * * * *

§ 293.217. Cleaning and maintenance.

* * * * *

(b) The operator may not allow putrescible waste to remain at the transfer facility at the end of the working day or for more than 24 hours, **[whichever interval is less] except that putrescible waste may remain at a transfer facility for any period of time up to 72 hours over a weekend or 3-day weekend if the transfer facility permit so provides**.

* * * * *

§ 293.218. Air resources protection.

(a) The operator shall implement fugitive air contaminant control measures, and shall otherwise prevent and control air pollution in accordance with the Air Pollution Control Act (35 P. S. §§ 4001—4015) and **[Subpart C,]** Article III (relating to air resources), and § 293.219 (relating to nuisance control).

* * * * *

§ 293.219. Nuisance control.

(a) The operator shall **[prevent and eliminate] control and minimize** the attraction, harborage or breeding of vectors.

(b) The operator also shall **[prevent] control** and **[eliminate] minimize** conditions not otherwise prohibited by this subchapter that are harmful to the environment or public health, or which create safety hazards, odors, dust, noise, unsightliness or other public nuisances.

§ 293.221. Litter.

* * * * *

(c) **[Litter] Blown off and intercepted litter** shall be collected at least weekly from fences, roadways, tree line barriers and other barriers and disposed or stored in accordance with the act and this article, unless a greater frequency is set forth in the permit.

SOIL AND WATER PROTECTION

§ 293.231. General requirements.

* * * * *

(b) A transfer facility shall be operated to prevent and control water pollution. An operator shall operate and maintain necessary water **pollution** treatment facilities until water pollution from or on the facility has been permanently abated.

* * * * *

§ 293.232. Soil erosion and sedimentation control.

The operator shall manage surface water and control erosion and sedimentation to:

(1) Divert surface water away from the storage area with measures and structures necessary to handle surface water flows based on a 25-year, 24-hour precipitation event, and supported by written calculations **and also comply with Chapter 102 (relating to erosion control).**

* * * * *

§ 293.234. Water supply replacement.

(a) An operator that adversely affects a water supply **by degradation, pollution or other means** shall restore the affected supply at no additional cost to the owner or replace the affected water supply with an alternate source that is of like quantity and quality to the original supply at no additional cost to the owner.

* * * * *

(d) Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply or extension of a private water supply, but do not include provision of bottled water or a water tank supplied by a bulk water hauling system, which are temporary water supplies.

EMERGENCY PROCEDURES

§ 293.241. Hazard prevention.

[(a)] ***

[(b) First aid facilities shall be available and job safety shall be practiced.]

RECORDKEEPING AND REPORTING

§ 293.251. Daily operational records.

* * * * *

(b) The daily operational record shall include the following:

* * * * *

(10) A record of rejected waste loads, and the reasons for rejecting the loads.

* * * * *

CESSATION AND CLOSURE

§ 293.262. Cessation of operations.

* * * * *

(b) An operator required under § 293.233 (relating to soil and groundwater monitoring) to conduct soil monitoring may discontinue soil monitoring upon cessation of processing operations **with the Department's approval**. In deciding whether to allow discontinuance of monitoring, the Department will consider the operational history of the facility, the likelihood that soil contamination will manifest itself in the future and other factors.

* * * * *

CHAPTER 295. COMPOSTING FACILITIES FOR RESIDUAL WASTE

Subchapter B. APPLICATION REQUIREMENTS FOR COMPOSTING FACILITIES

OPERATIONS

§ 295.112. Maps and related information.

(a) An application shall contain a topographic map **of the proposed permit area and adjacent area**, including necessary narrative descriptions, which shows the following:

(1) The boundaries and the names of the present owners of record of land, both surface and subsurface, including easements, rights-of-way and other property interests, for the proposed permit area and adjacent area; **the boundaries of the land within the proposed permit area;** and a description of title, deed or usage restrictions affecting the proposed permit area.

* * * * *

(4) The location and name of public and private water **[supplies] sources** that are located on the proposed permit area and adjacent area.

* * * * *

(14) Composting pads, tipping areas, storage areas **[and]**, windrow, **and loading/unloading areas**.

* * * * *

(b) **[An application shall contain a United States Department of Agriculture Soil Conservation Service soil map, or aerial photographs where current soil maps are unavailable, for the proposed permit area and adjacent area showing the site boundaries and soil types.**

(c)] ***

§ 295.115. Plan for access roads.

The application shall contain designs, cross sections and specifications for access roads, including load limits, to demonstrate compliance with § 295.212 (relating to access roads). **Access roads shall be designed and constructed to adequately handle the truck traffic expected at the facility.**

COMPOSTING

§ 295.121. Composting pad design.

* * * * *

(b) The application shall also contain a plan for inspection of composting pads **or vessels** to ensure **[the]** its integrity **[of the composting pad].**

(c) Composting pad **or vessel** plans and designs shall be consistent with § 295.231 (relating to composting pad **or vessel)**.

Subchapter C. OPERATING REQUIREMENTS FOR COMPOSTING FACILITIES

GENERAL PROVISIONS

§ 295.201. Basic limitations.

* * * * *

(f) All approved mitigation measures identified in the permit application shall be completed before a facility may accept waste unless a later date is authorized in writing by the Department for technical reasons.

§ 295.202. Areas where composting facilities are prohibited.

(a) Except for areas that were permitted prior to July 4, 1992, a composting facility may not be operated:

(1) In the 100-year floodplain of a water of this Commonwealth **unless demonstrated that the composting facility can be protected during flooding**.

* * * * *

(3) In or within 100 feet of a wetland other than an exceptional value wetland, unless storage, processing and disposal will not occur within that distance **or storage and processing take place in an enclosed facility** and one of the following **[is true] applies:**

(i) If the operation is in or along the wetland, the operator has received a permit from the Department under Chapter 105 (relating to dam safety and waterway management).

(ii) If the operation is not in or along the wetland, no adverse hydrologic or water quality impacts will result.

(4) **[Within 100 feet of a sinkhole or area draining into a sinkhole.**

(5)] ***

[(6)] (5) Within 100 feet of a perennial stream, unless **the** storage**[,] and** processing **[and disposal will not occur within that distance] take place in an enclosed facility** and no adverse water quality impact will result.

[(7)] (6) Within 50 feet of a property line unless the **[operator demonstrates that actual composting of waste is not occurring within that distance] storage and processing take place in an enclosed facility**.

[(8)] (7) ***

[(9)] (8) In an area where the **pad or vessel will be in contact with the** seasonal high water table or perched water table **[is less than 4 feet from the surface].**

(9) If a school, park or playground is nearby, the following apply:

(i) Except for an expansion of a residual waste composting permit issued prior to _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal), for a residual waste composting permit issued on or after _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal), within 300 yards of the following:

(A) A building which is owned by a school district or school and used for instructional purposes.

(B) A park.

(C) A playground.

(ii) The current property owner of a school building, park or playground may waive the 300-yard prohibition by signing a written waiver. Upon receipt of the waiver, the Department will waive the 300-yard prohibition and will not use the prohibition as the basis for the denial of a new permit.

(c) This section does not apply to **[a feature] features** that may come into existence after the date of the first newspaper notice under this subsection if the following apply:

* * * * *

DAILY OPERATIONS

§ 295.211. Signs and markers.

(a) A person or municipality that operates a composting facility shall identify the facility for the duration of operations by posting and maintaining a sign which will be clearly visible **and can be easily seen and read** at the junction of each access road and public road **unless otherwise approved by the Department**. The sign shall be constructed of a durable, weather resistant material **[and shall be of a minimum size of 3 feet by 4 feet with a light background and contrasting letters and numbers of a minimum height of 3 inches that can be easily seen and read. The sign shall show the name, business address and telephone number of the person or municipality operating the facility, the operating hours of the facility and the number of the current permit authorizing operations at the facility].**

* * * * *

§ 295.212. Access roads.

* * * * *

(c) An access road shall have a drainage system that is compatible with the natural drainage system, structurally stable and which will pass safely the peak flow from a 25-year, 24-hour precipitation event. The drainage system shall **[include sloped or crowned road surfaces, cross drains or culverts, stabilized ditches, erosion resistant surfacing, sediment traps and other appropriate sediment control measures as required by § 295.252 (relating to soil erosion and sedimentation control)] comply with Chapter 102 (relating to erosion control).**

(d) An access road shall be paved or surfaced with asphalt, gravel, cinders or other equivalent material **approved by the Department in the permit**. An access road shall be capable of withstanding the load limits projected by the applicant under § **[295.116 (relating to access control plan)] 295.115 (relating to plan for access roads)**. The maximum sustained grade of an access road may not exceed 12%.

* * * * *

(j) An access road shall be maintained to control dust and to prevent or control the tracking of mud on and off site.

§ 295.214. Measuring **and inspection of** waste.

* * * * *

(c) The operator shall inspect incoming waste to ensure that the waste received is consistent with this article and the permit unless otherwise approved by the Department.

§ 295.215. Equipment.

* * * * *

(b) **[Standby equipment shall be located on the site or at a place where it can be available within 24 hours.]** If a breakdown of the operator's equipment occurs, the operator shall utilize standby equipment as necessary to comply with the act, the environmental protection acts, this subchapter and its permit conditions.

* * * * *

(d) Equipment **[used to handle putrescible solid waste with which operations personnel are in direct contact shall be cleaned at the end of each working day or every 24 hours. Other equipment]** shall be cleaned at frequencies specified in the permit based on scheduled or emergency maintenance periods.

* * * * *

§ 295.217. Air resources protection.

(a) The operator shall control fugitive air contaminants and otherwise prevent and control air pollution in accordance with the Air Pollution Control Act (35 P. S. §§ 4001—4015) **[and Subpart C]**, Article III (relating to air resources) **and § 295.218 (relating to nuisance control)**.

* * * * *

§ 295.218. Nuisance control.

(a) The operator shall **[prevent] control** and **[eliminate] minimize** the attraction, harborage or breeding of vectors.

(b) The operator shall also **[prevent] control** and **[eliminate] minimize** conditions not otherwise prohibited by this subchapter that are harmful to the environment or public health, or which create safety hazards, odors, dust, noise, unsightliness and other public nuisances.

§ 295.220. Litter.

* * * * *

(c) At least weekly**, blown off and intercepted** litter shall be collected from fences, roadways, tree-lined barriers and other barriers, and disposed or stored in accordance with the act and the regulations thereunder, unless a greater frequency is set forth in the permit.

COMPOSTING PROVISIONS

§ 295.231. Composting pad **or vessel**.

* * * * *

(b) The composting pad **or vessel** shall be adequate in size and capacity to manage the projected solid waste, compost and residue volumes.

(c) A composting pad **or vessel** shall be:

(1) **[No more permeable than 1.0 x 10-7 cm/sec] Capable of preventing the migration of waste, or leachate generated from the composting process.**

(2) Designed, constructed and maintained to protect the integrity of the pad **or vessel** during the projected life of the facility.

* * * * *

(6) Designed and operated so that the physical and chemical characteristics of the composting pad **or vessel** and its ability to restrict the flow of solid waste, solid waste constituents or leachate is not adversely affected by the leachate.

* * * * *

(e) Upon completion of the construction of a composting pad **or vessel**, the operator shall:

(1) Submit a certification by a registered professional engineer on forms provided by the Department. The certification shall describe the composting pad **or vessel** being certified, using drawings and plans, if appropriate, and shall state that the actual construction was observed by the engineer or persons under his direct supervision, and that the construction was carried out in a manner that is consistent with the permit.

(2) Notify the Department that the facility is ready for inspection. A solid waste may not be composted, and solid waste or compost may not be stored, loaded or unloaded on the composting pad **or in the composting vessel**, until the Department has conducted an inspection and has transmitted its written approval to the permittee indicating that the construction was done according to the permit.

[(f) The Department may waive or modify the requirements of this section for facilities that use in-vessel composting.]

SOIL AND WATER PROTECTION

§ 295.253. Sedimentation ponds.

* * * * *

(b) Sedimentation ponds shall be constructed**, operated and maintained** under this section, Chapters 102 and 105 (relating to erosion control; and dam safety and

waterway management) and the minimum design criteria contained in the United States Soil Conservation Service's Engineering Standard 378, 'Pond' Pa.**, as amended.**

* * * * *

§ 295.255. Water supply replacement.

(a) An operator which adversely affects a water supply **by degradation, pollution or other means** shall restore the affected supply at no additional cost to the owner or replace the affected water supply with an alternate source that is of like quantity and quality to the original supply at no additional cost to the owner.

* * * * *

(d) Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply or extension of a private water supply, but do not include provision of bottled water or a water tank supplied by a bulk water hauling system, which are temporary water supplies.

EMERGENCY PROCEDURES

§ 295.261. Hazard prevention.

[(a)] ***

[(b) First aid facilities shall be available and job safety shall be practiced.]

RECORDKEEPING AND REPORTING

§ 295.271. Daily operational records.

* * * * *

(b) The daily operational record shall include the following:

* * * * *

(6) A description of waste handling problems or emergency disposal activities.

* * * * *

CESSATION AND CLOSURE

§ 295.282. Cessation of operations.

* * * * *

(c) An operator required under § 295.254 (relating to soil and groundwater monitoring) to conduct soil monitoring may discontinue soil monitoring upon cessation of composting operations **with the Department's approval**. In deciding whether to allow the discontinuance of monitoring, the Department will consider the operational history of the facility, the likelihood that soil contamination will manifest itself in the future and other factors.

* * * * *

CHAPTER 297. INCINERATORS AND OTHER PROCESSING FACILITIES

Subchapter B. APPLICATION REQUIREMENTS FOR PROCESSING FACILITIES

§ 297.103. Maps and related information.

An application shall contain a topographic map **of the proposed permit area and adjacent area**, including necessary narrative descriptions, which show the following:

(1) The boundaries and names of present owners of record of land, both surface and subsurface, including easements, rights-of-way and other property interests, for the proposed permit area and adjacent area; **the boundaries of the land within the proposed permit area**; and a description of title, deed or usage restrictions affecting the proposed permit area.

* * * * *

(4) The location and name of public and private water **[supplies] sources** that are located on or within **[1/2] 1/4** mile of the proposed facility. If more than 50 wells are located within the **[1/2] 1/4** mile radius, the applicant may identify only the closest wells in each direction and generally describe the location and number of wells within **[1/2] 1/4** mile of the proposed facility.

* * * * *

§ 297.105. Plan for access roads.

The application shall contain designs, cross sections and specifications for access roads, including load limits, to demonstrate compliance with § 297.213 (relating to access roads). **Access roads shall be designed and constructed to adequately handle the truck traffic expected at the facility.**

Subchapter C. OPERATING REQUIREMENTS FOR PROCESSING FACILITIES

GENERAL PROVISIONS

§ 297.201. Basic limitations.

* * * * *

(f) All approved mitigation measures identified in the permit application shall be completed before a facility may accept waste unless a later date is authorized in writing by the Department for technical reasons.

§ 297.202. Areas where incinerators and other processing facilities are prohibited.

(a) Except for areas that were permitted prior to July 4, 1992, residual waste processing facilities subject to this chapter may not be operated:

* * * * *

(3) In or within 100 feet of a wetland other than an exceptional value wetland, unless storage, processing and disposal will not occur within that distance **or the storage and processing take place in an enclosed facility** and one of the following **[is true] applies:**

* * * * *

(5) Within 100 feet of a perennial or intermittent stream, unless **the** storage, **and** processing **[and disposal will not occur within that distance] take place in an enclosed facility** and no adverse hydrologic or water quality impacts will result.

(6) Within 50 feet of a property line unless the **[operator demonstrates that actual processing of waste is not occurring within that distance] storage and processing take place in an enclosed facility**, or that the owners of occupied dwellings within that distance have provided written waivers consenting to the facility being closer than 50 feet. The waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.

* * * * *

DAILY OPERATIONS

§ 297.211. Signs and markers.

(a) A person or municipality that operates a facility subject to this subchapter shall identify the operation for the duration of residual waste processing operations by posting and maintaining a sign which is clearly visible **and can be easily seen and read** at the junction of each access road and public road **unless otherwise approved by the Department**. The sign shall be constructed of a durable, weather-resistant material **[and shall be of a minimum size of 3 feet by 4 feet with a light background and contrasting letters and numbers of a minimum height of 3 inches that can be easily seen and read. The sign shall show the name, business address and telephone number of the person or municipality operating the facility, the operating hours of the facility and the number of the current permit authorizing operations at the facility]**.

(b) Permit area markers **and the permanent physical markers for the grid coordinate system** shall be:

* * * * *

§ 297.212. Access control.

* * * * *

(b) The operator shall **[construct and]** maintain a fence or other suitable barrier around the site sufficient to prevent unauthorized access.

* * * * *

§ 297.213. Access roads.

* * * * *

(c) An access road shall have a drainage system that is compatible with the natural drainage system, structurally stable and which will pass safely the peak flow from a 24-hour, 25-year precipitation event. **[The drainage system shall include sloped or crowned road surfaces, cross drains or culverts, stabilized ditches, erosion resistant surfacing, sediment traps and other appropriate sediment control measures as required by § 297.232 (relating to soil erosion and sedimentation control).] The drainage system shall comply with Chapter 102 (relating to erosion control).**

(d) An access road shall be paved or surfaced with asphalt, gravel, cinders or other equivalent material **approved by the Department in the permit**. An access road shall be capable of withstanding the load limits projected by the applicant under § 297.105 (relating to plan for access roads). The maximum sustained grade of an access road may not exceed 12%.

* * * * *

(i) An access road shall be maintained to control dust and to prevent or control the tracking of mud on and off site.

§ 297.214. Measuring **and inspection of** waste.

* * * * *

(c) The operator of a facility shall inspect and monitor incoming waste to insure that the disposal of waste is consistent with this article and the permit. Unless otherwise approved by the Department, the monitoring and inspection shall include screening of waste for radioactive isotopes and be consistent with § 287.134 (relating to waste analysis plan).

§ 297.215. Equipment.

* * * * *

(b) **[Standby equipment shall be located on the site or at the place where it can be available within 24 hours.]** If a breakdown of the operator's equipment occurs, the operator shall utilize standby equipment as necessary to comply with the act, the environmental protection acts, this subchapter and its permit conditions.

* * * * *

(d) Equipment **[used to handle putrescible solid waste with which operations personnel are in direct contact shall be cleaned at the end of each working day or every 24 hours. Other equipment]** shall be cleaned at frequencies specified in the permit based on scheduled or emergency maintenance periods.

§ 297.216. Unloading area.

* * * * *

(b) The loading areas and unloading areas shall be constructed of impervious material which is capable of being cleaned by high pressure water spray and shall be equipped with drains or sumps connected to a sanitary sewer system or treatment facility to facilitate the removal of water. **Drains or treatment systems may be connected to a sanitary sewer system if a waste characterization is submitted to the sewage treatment plant operator, and the operator finds that the treatment plant can fully treat the waste stream. Leachate may also be collected in holding tanks prior to its transport to the sewage treatment plant.**

* * * * *

(f) **[Solid] Residual** waste shall be confined to the unloading area or a storage area approved as part of the operator's permit.

* * * * *

§ 297.217. Cleaning and maintenance.

* * * * *

(b) **[Except for scheduled or emergency shutdown of processing operations, the] The** operator may not allow putrescible waste to remain at the facility at the end of the day or for more than 24 hours **except that putrescible waste may remain at the facility for any time period up to 72 hours over a weekend or 3-day weekend if provided for in the permit.**

* * * * *

§ 297.218. Air resources protection.

(a) Emissions from a residual waste processing facility shall be consistent with the Air Pollution Control Act (35 P. S. §§ 4001—4015), **[Subpart C]**, Article III (relating to air resources), the terms or conditions of its permit and, if applicable, the most recent edition of the Department's criteria for best available technology, and other applicable Departmental guidelines.

* * * * *

§ 297.219. Nuisance control.

(a) The operator **[may not cause or allow] shall control and minimize** the attraction, harborage or breeding of vectors.

(b) The operator shall **[prevent] control** and **[eliminate] minimize** conditions not otherwise prohibited by this subchapter that are harmful to the environment or public health, or which create safety hazards, odors, dust, noise, unsightliness and other public nuisances.

§ 297.221. Litter.

* * * * *

(c) **[Litter] Blown off or intercepted litter** shall be collected at least weekly from fences, roadways, tree line barriers and other barriers and disposed or stored in accordance with the act and the regulations thereunder, unless a greater frequency is set forth in the permit.

SOIL AND WATER PROTECTION

§ 297.232. Soil erosion and sedimentation control.

The operator shall manage surface water and control erosion and sedimentation to:

(1) Divert surface water away from the storage area with measures and structures necessary to handle surface water flows, based on a 25-year, 24-hour precipitation event, and supported by written calculations **and also in compliance with Chapter 102 (relating to erosion control)**.

* * * * *

§ 297.234. Water supply replacement.

(a) An operator which adversely affects a water supply **by degradation, pollution or other means** shall restore the affected supply at no additional cost to the owner or replace the affected water supply with an alternate source that is of like quantity and quality to the original supply at no additional cost to the owner.

* * * * *

(d) Permanent water supplies include development of a new well with a distribution system, interconnection with a public water supply, or extension of a private water supply, but do not include provision of bottled water or a water tank supplied by a bulk water hauling system, which are temporary water supplies.

EMERGENCY PROCEDURES

§ 297.253. Implementation of contingency plan.

* * * * *

(c) After an emergency, the operator of the facility shall:

* * * * *

(2) Prevent processing, storage or disposal of solid waste in the area affected by the emergency until the operator has cleaned up the area, and the Department has **[inspected and]** approved the **resumption of operation after the** cleanup.

RECORDKEEPING AND REPORTING

§ 297.261. Daily operational records.

* * * * *

(b) The daily operational record shall include the following:

* * * * *

(10) A record of rejected waste loads and the reasons for rejecting the loads.

* * * * *

§ 297.262. Annual operation report.

* * * * *

(c) The annual operation report shall be accompanied by a nonrefundable annual permit administration fee in the form of a check payable to the "Commonwealth of Pennsylvania" for the following amounts:

(1) **[Nineteen] Six** hundred **fifty** dollars for facilities that incinerate residual waste.

* * * * *

CHAPTER 299. STORAGE AND TRANSPORTATION OF RESIDUAL WASTE

Subchapter A. STANDARDS FOR STORAGE OF RESIDUAL WASTE

SCOPE

§ 299.101. Scope.

* * * * *

(b) In addition to the requirements of subsection (a), the following requirements shall be met:

* * * * *

(2) A person or municipality that stores the types of waste identified in §§ 299.151—**[299.154] 299.163** (relating to types of waste) shall store the waste under the applicable provisions of those sections.

* * * * *

GENERAL

§ 299.115. Nuisance control.

(a) A person or municipality that stores residual waste shall:

(1) **[Eliminate conditions conducive to] Control and minimize** the harborage, breeding or attraction of vectors.

(2) Take other measures necessary to **[prevent] control and minimize** the presence of vectors.

(3) Immediately take measures necessary to exterminate **[them, where]** vectors **[are present]**.

(b) A person or municipality storing residual waste shall also **[prevent and eliminate] minimize and control** conditions not otherwise prohibited by this subchapter that are harmful to the public health, public safety or the environment, or which create safety hazards, odors, dust, unsightliness or other public nuisances.

TYPES OF STORAGE CONTAINERS AND TANKS

§ 299.121. Containers.

(a) A person or municipality storing residual waste in containers shall **prevent leaks and** provide a sufficient number of containers to contain solid waste generated during periods between regularly scheduled collections.

* * * * *

(d) All containers shall be clearly labeled as "residual waste" or as the specific type of residual waste.

§ 299.122. Storage tanks.

Residual waste storage tanks shall **[be designed, in accordance with] meet the design and performance** standards established by or under the Storage Tank and Spill Prevention Act (35 P. S. §§ 6021.101—6021.2105). **[The Department may waive or modify those requirements for storage tanks which are not subject to the Storage Tank and Spill Prevention Act.] The storage tank shall be clearly labeled as "residual waste" and identify the type of residual waste.**

STORAGE PILES

§ 299.131. General requirements.

* * * * *

(e) For storage piles without a liner system or storage pad, the Department may require the person or municipality to install a water quality monitoring system in accordance with §§ 288.251—288.255.

IMPOUNDMENTS

§ 299.144. Operating requirements.

(a) A person or municipality that stores residual waste in a surface impoundment shall design, operate and maintain the impoundment in accordance, at a minimum, with the following:

* * * * *

(2) Section **[289.222] 289.223** (relating to access **[control] roads)**.

(3) Sections **[289.227] 293.218** and **[289.228] 293.219** (relating to air resources protection; and nuisance control).

* * * * *

(8) Section 289.522(a)(2), **(6) and** (7) **[and (10)]** (relating to areas where Class II residual waste disposal impoundments are prohibited).

(9) **[Section] Notwithstanding the references to "disposal," § 289.423(a)(1)—(3), (5) and (6) (relating to minimum requirements for acceptable waste) or** § 289.523(a) **[(4), (6), (7), (9)] (1)—(8)** and (11) (relating to minimum requirements for acceptable waste).

(10) **[If] Notwithstanding the references to "disposal," if** the residual waste to be stored meets the requirements of § 289.523(a), the following **shall be met**:

(i) Section **[289.432(a) and (b)] 289.532(a)—(c)** (relating to general limitations).

* * * * *

(11) **[If] Notwithstanding the references to "disposal,"** if the residual waste to be stored does not meet the requirements of § 289.523(a), the following **shall be met**:

(i) Section 289.432(a)—(c) (relating to general limitations).

[(i)] (ii) ***

[(ii)] (iii) ***

[(iii)] (iv) ***

[(iv)] (v) ***

[(v)] (vi) ***

* * * * *

TYPES OF WASTE

§ 299.155. Storage of waste tires and tire derived materials.

(a) This section and §§ 299.156—299.163 do not apply to persons or municipalities who store less than 500 waste tires in open storage or who store less then 1,500 waste tires in enclosed storage unless the open or enclosed storage threatens or causes harm to the public health, safety, welfare or the environment.

(b) The requirements of this section and §§ 299.156—299.163 may be waived or modified for small piles at the location of waste tire generators.

(c) No person or municipality may accumulate tires or tire derived material speculatively or store for longer than 1 year. The actual tons of waste tires removed from a facility shall be verified through weight receipts.

(d) A person or municipality storing waste tires or tire derived material shall maintain operational records that provide detailed information in accordance with § 299.112 (relating to design and operation).

§ 299.156. Notice by waste tire storage sites operators.

(a) By _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), each operator of a waste tire storage site shall file a notice on a form prepared by the Department which includes the following:

(1) A brief description of the type and number of waste tires and the type and weight or volume of tire derived materials being stored at the waste tire storage site.

(2) A brief description of the physical design and layout of the waste tire storage site, including a description of structures used for storing waste tires or tire derived materials and their locations at the storage site, a diagram of the locations and approximate sizes of any piles of waste tires or tire derived materials at the storage site and a description of the location of emergency equipment at the storage site.

(3) The approximate date upon which the operator began to store 500 or more waste tires in open storage or 1,500 or more waste tires in enclosed storage.

(4) Information showing how the operator will comply with § 299.155(c) (relating to storage of waste tires and tire derived materials).

(5) The address of the storage site and the individual responsible for operating the storage site.

(6) Verification of landowner consent to operate a waste tire storage site.

(b) An operator of a waste tire storage site that is not subject to the requirements of this section, §§ 299.155 and 299.157—299.163 on _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), based on § 299.155(a), shall file the notice required by subsection (a) if the waste tire storage site becomes subject to the requirements of this section, §§ 299.155 and 299.157—299.163 after that date.

(c) As of _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), no person or municipality operating a waste tire storage site may store waste tires or tire derived materials at the storage site unless the person or municipality has filed with the Department a notice that is consistent with this section.

§ 299.157. General limitations on storage of waste tires and tire derived materials.

(a) Indoor storage of waste tires or tire derived materials shall be consistent with "The Standard for the Storage of Rubber Tires," National Fire Protection Association Standard 231 D, (NFPA 231D), as amended.

(b) When waste tires or tire derived materials are stored outdoors, each waste tire pile or tire derived material pile shall:

(1) Cover a surface area not greater than 2,500 square feet.

(2) Have a vertical height not greater than 15 feet.

(3) Maintain corridors as firebreaks on all sides of a tire pile of at least 50 feet. Corridors shall be maintained free from obstructions that could limit access in the event of an emergency.

(4) For shredded or chipped tires stored in piles, cover a surface area of no more than 2,500 square feet, and be no more than 15 feet high. Thirty-five foot wide corridors shall be maintained for fire breaks on all sides of a pile with no point in a pile being more than 25 feet from a fire break. Corridors shall be kept free from obstructions that could limit access in the event of an emergency.

(5) For baled tires stored in stockpiles, cover a surface area of no more than 5,000 square feet, and may be no more than 15 feet high. Thirty-five foot wide corridors shall be maintained for fire breaks on all sides of a pile with no point in a pile being more than 25 feet from a fire break. Corridors shall be kept free from obstructions that could limit access in the event of an emergency.

(6) The firebreaks shall be free of waste, equipment and structures, and vegetation shall be maintained below 6″ in length at all times.

(7) Outdoor storage of waste tires or tire derived materials shall be conducted to prevent the discharge of fire-generated oils and liquids into the surface water and groundwater of this Commonwealth.

(8) Outdoor storage of waste tires and tire derived material shall be conducted to control mosquito propagation during warm weather. Controls may include use of tarps, indoor storage screens or spraying.

(9) A copy of a Preparedness, Prevention and Contingency (PPC) plan, that is consistent with the Department's most recent guidelines, shall be prepared and maintained at the waste tire storage facility and be updated annually. The applicable provisions of the Department approved PPC plan shall be immediately implemented for any emergency that affects or threatens public health, safety, welfare or the environment.

(c) Storage of waste tires or tire derived materials which occurs at a permitted processing or disposal facility shall be covered under the permit, and is limited to the total number or amount of waste tires or tire derived materials which can be processed or disposed by the permitted facility during a year. The processing or disposal permit shall incorporate the requirements of this subchapter.

(d) A waste tire storage site may not be greater than 5 acres in total area.

(e) Owners or operators of waste tire storage sites may not maintain additional storage areas on contiguous property.

§ 299.158. Areas where storage of waste tires or tire derived materials is prohibited.

A person or municipality may not store waste tires or tire derived materials:

(1) In the 100 year floodplain of any waters of this Commonwealth, unless the Department approves a method of protecting the facility from a 100 year flood consistent with the Flood Plain Management Act (32 P. S. §§ 679.101—679.601), the Stormwater Management Act (32 P. S. §§ 680.1—680.17) and the Dam Safety and Encroachment Act (32 P. S. §§ 693.1—693.27).

(2) In or within 300 feet of an exceptional value wetland.

(3) In or within 100 feet of a wetland other than an exceptional value wetland.

(4) Within 300 feet measured horizontally from an occupied dwelling, unless the owner thereof has provided a written waiver consenting to the activities being closer than 300 feet.

(5) Within 100 feet of a sinkhole or area draining into a sinkhole.

(6) Within 100 feet of a perennial stream.

(7) Within 300 feet of a water source.

(8) Within 50 feet of a property line unless the owner has provided a written waiver consenting to the facility being closer than 50 feet.

§ 299.159. Access control.

(a) A gate or other barrier shall be maintained at all potential vehicular access points to block unauthorized access to the site when an attendant is not on duty.

(b) The operator shall construct and maintain a fence or other suitable barrier around the area sufficient to prevent unauthorized access.

(c) Access to the site shall be limited to those times when an attendant is on duty.

§ 299.160. Hazard prevention.

(a) Persons or municipalities storing waste tires or tire derived materials shall design, construct, maintain and operate the storage site to prevent and minimize the potential for fire, explosion or release of solid waste constituents to the air, water or soil of this Commonwealth or threaten public health or safety, public welfare or the environment.

(b) A person or municipality may not cause or allow the open burning of waste tires or tire derived materials.

(c) Each person or municipality storing waste tires or tire derived materials shall have available

in proper working condition the following equipment at the storage site unless otherwise approved by the Department in writing:

(1) An internal communications or alarm system capable of providing immediate emergency instructions by voice or signal to facility personnel.

(2) A communications system capable of summoning emergency assistance from local police, fire departments, emergency medical services, and from State and local emergency response agencies.

(3) Portable fire extinguishers and suitable fire control equipment.

(4) Available water, at sufficient volume and pressure and suitable foam agent (3%—6% mixture) and application equipment at the storage site (or an agreement with the local fire department to provide the equipment) to temporarily contain a fire at the facility until emergency personnel arrive.

(5) Equipment sufficient in size and design to provide timely movement of tires and tire derived materials in case of an emergency.

(6) For indoor tire storage, an active fire suppression system in the building.

(d) The operator of a waste tire storage site shall immediately implement the applicable provisions of the Preparedness, Prevention and Contingency (PPC) plan if there is a fire or other event that threatens public health, safety, welfare or the environment or threatens personal injury. In addition, the operator shall immediately:

(1) Assess actual or potential hazards to public health, safety, welfare or the environment that are occurring or may occur.

(2) Ensure that fires or other hazards do not occur, reoccur or spread to other solid waste at the storage site.

(3) Telephone the Department and county emergency management agency and report the following information:

(i) The name of the person reporting the incident and telephone number where that person can be reached.

(ii) The name and address of the storage site.

(iii) The date, time and location of the fire or other event that threatens the public health, safety, welfare or the environment.

(iv) A brief description of the event being reported, the type of solid waste involved and what dangers to public health, safety, welfare or the environment exist or may occur.

(v) The nature of any injuries.

(vi) Parts of the PPC plan being implemented to alleviate the situation.

(3) After a fire or other emergency, the operator of a waste tire storage site shall:

(1) Remediate the area affected by the emergency and treat, store or dispose of recovered solid waste, contaminated soil, contaminated water or other material in a manner approved by the Department.

(2) Prevent disposal, processing, storage or treatment of solid waste in the area affected by the emergency until the operator has remediated the area, and the Department has inspected and approved the remediation.

§ 299.161. Soil and water protection.

(a) Surface water runoff from storage areas shall be minimized. Collection of surface water runoff shall be managed in accordance with The Clean Streams Law and the regulations thereunder.

(b) Surface water run-on to storage areas shall be minimized.

(c) Waste tires or tire derived materials may not be stored so as to cause adverse affects on groundwater.

(d) The Department may require a person or municipality that stores waste tires or tire derived materials to conduct soil or groundwater monitoring, or both.

§ 299.162. Annual report for waste tire storage sites.

(a) Each person or municipality that stores waste tires or tire derived materials shall submit to the Department an annual operation report on or before June 30 of each year.

(b) The annual report shall be maintained onsite. If the storage site is not part of a permitted processing or disposal facility, the annual report shall be maintained for at least 5 years. The report shall include:

(1) The approximate number and type of waste tires that were being stored at the storage site on January 1 of the preceding calendar year, and the approximate number and type of waste tires that were being stored at the storage site on December 31 of the preceeding calendar year.

(2) The approximate number and type of waste tires that were received at the storage site in the preceeding calendar year, the person and location from which they were shipped and the name of the transporter.

(3) The approximate number and type of waste tires that were shipped from the site in the preceeding calendar year, the person and location to which they were shipped and the end use for which they were shipped.

(4) The weight or volume of waste tires and tire derived materials that were being stored at the storage unit on January 1 of the preceding calendar year and the weight or volume of tire derived materials that were being stored at the storage site on December 31 of the preceding calendar year.

(5) The weight or volume of waste tires and tire derived materials that were shipped from the storage site in the preceeding calendar year, the person and location from which they were shipped and the end use for which they were shipped.

(c) The annual report shall be based on a daily operational record, which shall be maintained by the person or municipality storing waste tires for each day that waste tires are received or transported off the storage site.

§ 299.163. Cessation of operations.

Upon cessation of waste tire or tire derived material storage activities, the operator shall imme-

diately remove all waste tires and tire derived materials from the storage site, and provide for the processing or disposal of the materials or waste in accordance with the act, the environmental protection acts, and this title.

Subchapter B. STANDARDS FOR COLLECTING AND TRANSPORTING OF RESIDUAL WASTE

SCOPE

§ 299.201. Scope.

(a) A person or municipality that transports residual waste that is not mixed with waste that is regulated under Article VIII (relating to municipal waste) shall comply with §§ **285.218 and** 299.211—299.219 (relating to **signs on vehicles; and** general provisions). In addition, a person or municipality that transports waste referred to in §§ 299.231 and 299.232 (relating to types of waste) shall transport the waste in accordance with the applicable provisions of these sections, and may not mix the waste with other types of waste.

(b) A person or municipality that transports residual waste that is mixed with waste that is regulated under Article VIII shall comply with §§ 285.211—**[285.217] 285.218** (relating to general provisions).

GENERAL PROVISIONS

§ 299.219. Recordkeeping and reporting.

(a) A person or municipality that transports residual waste shall make and maintain an operational record for each day that residual waste is collected or transported, or both. The daily operational record shall be kept in the cab of each transportation vehicle on the date of collection or transportation. The record shall include the following:

* * * * *

(8) The license plate number of the trailer transporting the waste.

* * * * *

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