

**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**Bureau of Environmental Cleanup and Brownfields**

**DOCUMENT NUMBER:** 262-4500-606

**TITLE:** Applicable or Relevant and Appropriate Requirements (ARARs) for Cleanup Response and Remedial Actions in Pennsylvania

**EFFECTIVE DATE:** October 26, 2013

**AUTHORITY:** The Land Recycling and Environmental Remediation Standards Act (35 P.S. 6026.101 *et seq.*), Section 106 (A) and the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA), (P.L. 96-510).

**POLICY:** The remedial actions conducted at various waste sites and facilities in Pennsylvania required the implementation of regulatory standards from several bureaus within the Department of Environmental Protection (DEP or Department) and other agencies. This document provides an index of these standards.

**PURPOSE:** This guidance document contains a list of state standards and requirements for cleanup-related activities at waste sites in Pennsylvania. The purpose of this document is to identify, in a general fashion, state standards and requirements that will serve as a guide for the determination of specific cleanup-related criteria. This final document revises and supersedes the August 15, 2002 guidance document.

**APPLICABILITY:** This document applies to all Department personnel and is available to the public for evaluating remedial action cleanups, and establishing remediation standards under the Land Recycling and Remediation Standards Act, the Clean Streams Law, the Air Pollution Control Act, the Solid Waste Management Act, the Infectious and Chemotherapeutic Waste Law, the Hazardous Sites Cleanup Act, and the Storage Tank and Spill Prevention Act. In addition, this guidance applies to the evaluation of state regulations and standards as they apply to the federal CERCLA program.

**DISCLAIMER:** The policies and procedures outlined in this guidance are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation. There is no intent on the part of DEP to give the rules in these policies that weight or deference. This document establishes the framework within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.

**PAGE LENGTH:** 42 pages

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## **Introduction**

This document contains a list of requirements for cleanup-related activities at waste sites in the Commonwealth of Pennsylvania. The purpose of this document is to identify, in a general fashion, state standards and requirements that will serve as a starting point for the determination of site-specific cleanup-related statute, regulatory and policy criteria.

The development and specific identification of cleanup criteria is a dynamic process. Some standards and requirements can be readily identified (i.e., ambient water quality criteria and promulgated drinking water standards). Most, however, can only be derived after submittal and review of detailed information regarding site location, system design, and development of contaminant-specific discharge limits.

It should be noted that this document is a comprehensive list of environmental standards and requirements; however, the document is not all-inclusive. Additionally, regulatory standards and requirements are subject to change. Therefore, further consultation with, and analysis by, the appropriate Department and other Commonwealth personnel will be required.

Finally, this document is advisory and does not represent any determination made by the Department of Environmental Protection. This document shall in no way be construed or understood to create any duty or obligation upon the Department of Environmental Protection or the Commonwealth of Pennsylvania.

## **Definition of ARARS**

Section 121(d) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), (as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA)); the Pennsylvania Hazardous Sites Cleanup Act (HSCA or Act 108), Section 504; and the Land Recycling and Environmental Remediation Standards Act (Act 2), Section 106(A), require that fund-financed enforcement and federal facility remedial cleanup actions comply with requirements or standards under federal and state environmental laws. The requirements that must be complied with are those that are applicable, or relevant and appropriate, to the hazardous substances, pollutants, or contaminants at a site or to the circumstances of the release. Compliance is required at the completion of the remedial action for hazardous substances, pollutants, or contaminants that remain on-site.

Section 504 of HSCA and those sites remediated under Act 2, Section 106(A), including federal CERCLA sites, shall meet applicable or relevant and appropriate cleanup standards (ARARs). Act 2 further provides that DEP must promulgate, by rulemaking, cleanup standards that are applicable to remedial responses to the releases of hazardous substances or contaminants. These applicable standards are contained in 25 Pa. Code Chapter 250, Administration of Land Recycling Program (Chapter 250).

Applicable requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under federal or state law, that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA or state action. “Applicability” implies that the remedial action or the circumstances at the site satisfy all of the jurisdictional prerequisites of a requirement.

Relevant and appropriate requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not “applicable” to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA or state action, address problems or situations sufficiently similar to those encountered, and that their use is well suited to the particular site.

The relevance and appropriateness of a requirement can be judged by comparing a number of factors, including the characteristics of the remedial action, the hazardous substances in question, or the physical circumstances of the site, with those addressed in the requirement. It is also helpful to look at the objective and origin of the requirement. For example, while Resource Conservation and Recovery Act (RCRA) regulations may not be applicable to closing undisturbed hazardous waste in place, the RCRA regulation for closure by capping may be deemed relevant and appropriate.

A requirement that is judged to be relevant and appropriate must be complied with to the same degree as if it were applicable. However, there is more discretion in this determination. It is possible for only part of a requirement to be considered relevant and appropriate, the rest being dismissed if judged not to be relevant and appropriate in a given case.

**Non-promulgated** or non-regulatory documents (health advisories, guidance, proposed regulations) issued by the state or federal government are not considered potential ARARs and are referred to as “to be considered” requirements or TBCs. **TBCs** are evaluated along with ARARs and are considered appropriate in the absence of a specific ARAR or where ARARs are not sufficiently protective in developing cleanup goals.

## Types of ARARs

There are several different types of requirements that cleanup actions may have to comply with. The classification of ARARs is listed below with specific matrices attached as appendices to this document:

Chemical-specific requirements establish legal health or risk-based concentration limits or ranges, in various environmental media for specific hazardous substances, pollutants, or contaminants. Examples: Maximum Contaminant Levels, National Ambient Air Quality Standards and Statewide Health Standards for Soil and Groundwater.

These requirements may set protective cleanup levels for the chemical of concern in the designated media, or else indicate an acceptable level of discharge (e.g., air emission or wastewater discharge, taking into account water quality standards) where one occurs in a remedial activity. If a chemical has more than one such requirement, the more stringent ARAR should be complied with.

The Remediation Standards in Chapter 250, established under Act 2, are to be implemented when any site is remediated under the Clean Streams Law, Air Pollution Control Act, Solid Waste Management Act, Infectious and Chemotherapeutic Waste Law, Hazardous Sites Cleanup Act and the Storage Tank and Spill Prevention Act. In addition, the standards established under Act 2 and Chapter 250 shall be considered as ARARs under CERCLA.

Action-specific requirements or design specifications set controls or restrictions on particular kinds of activities related to management of hazardous substances, pollutants, or contaminants. Examples: RCRA regulations for closure of hazardous waste storage or disposal units; RCRA incineration standards; Clean Water Act pretreatment standards for discharges to POTWs.

These requirements are triggered not by the specific chemicals present at a site but rather by the particular remedial activities that are selected to accomplish a remedy. Since there are usually several alternative actions for any remedial site, very different requirements can come into play. These action-specific requirements may specify particular performance levels, actions, or technologies, as well as specific levels (or a methodology for setting specific levels) for discharged or residual chemicals.

Location-specific requirements set restrictions on activities depending on the characteristics of a site. Examples: Federal and state siting laws for hazardous waste facilities; sites on National Register of Historic Places.

These requirements function like action-specific requirements. Alternative remedial actions may be restricted or precluded depending on the location or characteristics of the site and the requirements that apply to it.

## Specific Standards, Special Standard, and Modifications

- A. **Chemical, Location and Action-Specific Matrices** - The specific matrices attached to this document and referenced above represent identifications of ARARs at the time this document was prepared. This information shall **not** be construed as establishing a complete or final list of Pennsylvania ARARs. In addition to the numbers or description of ARARs contained in the matrices, other ARARs may exist that are derived from Pennsylvania statutes and regulations that may not be identifiable except in the context of a specific case. The Department reserves the right to identify additional ARARs at any time.

- B. Site-specific Standard** - Act 2 and Chapter 250, allows for site-specific standards that achieve remediation levels based on a site-specific risk assessment. This way any substantial present or future risk to human health and the environment is eliminated or reduced to protective levels based upon the present or currently planned future use of the property comprising the site, as specified in Section 250.401.
- C. Special Industrial Areas** - The special industrial area provision established in Section 305 of Act 2 creates incentives to reuse industrial properties. Cleanups at designated special industrial areas provide for remediation requirements that are intended to allow these sites to be put back into productive use in the community. Act 2 established this provision to encourage the redevelopment of properties used for industrial activities. The remediator and the property must meet eligibility requirements to be considered as a special industrial area under Act 2, perform necessary remediation, and meet required notification and reporting requirements.
- D. Modification of ARARs - The Department may modify an ARAR if any of the following apply:**
1. Compliance with a requirement at a site will result in greater risk to the public health and safety or the environment than alternative options.
  2. Compliance with a requirement at a site is technically infeasible from an engineering perspective.
  3. The remedial actions selected will attain a standard of performance that is equivalent to that required under the otherwise applicable requirement through use of another method or approach.
  4. The remedial action selected will not provide for cost-effective response.
- E. Fund Money Modification** - The Department may modify an ARAR where the site is being remediated through the use of fund money where the Department determines that such a modification is in the public interest.
- F. Effect of Modification under C and D (above)** - Where the Department allows a modification to any ARAR, such modification shall not be construed to constitute a modification of any responsible person's legal liability unless liability protection is expressly stated in accordance with Chapter 5 of Act 2. Such a modification shall therefore only constitute an authorization by the Department to proceed with a cleanup plan in accordance with the modification and such conditions as the Department may proscribe.

## **DEP's Bureau of Environmental Cleanup and Brownfields**

### A. Statutory Authority:

The Hazardous Sites Cleanup Act 108 (35 P.S. §6020.101). Removal and remediation program independent from the federal Superfund program. Provides means for funding and enforcement at response and remediation cleanups, and provides for hazardous waste facilities siting.

The Land Recycling and Environmental Remediation Standards Act 2 (35 P.S. §6026.101 et seq.). Providing for the recycling of existing industrial and commercial sites; further defining the cleanup liability of new industries and tenants; establishing a regulatory statute for setting environmental remediation standards; establishing the Voluntary Cleanup Loan Fund, the Industrial Land Recycling Fund and the Industrial Sites Cleanup Fund to aid industrial site cleanups; assigning powers and duties to the Environmental Quality Board and the Department of Environmental Protection; and making appeals.

The Storage Tank and Spill Prevention Act, Act of August 5, 1989, 35 P.S. §§6021.101–6021.2104 provides for the regulation of storage tanks and storage tank facilities.

### B. Regulations:

Numerous requirements are promulgated under Act 2. These regulations are found in the *Pennsylvania Bulletin*, and are also codified in Title 25 of the Pa. Code. Relevant chapters are as follows:

#### 1. Land Recycling and Environmental Remediation Standards

Chapter 250 (25 Pa. Code §§250.1-250.708) - Administration of Land Recycling Program. This chapter provides remediation standards: background standard, statewide health standards, site-specific standard, special industrial area standards, which shall be used whenever site remediation is voluntarily conducted or is required under environmental statutes in Section 106 of Act 2 (35 P.S. §6026.106).

#### 1. Storage Tank Regulations

Chapter 245 (25 Pa. Code §§245.1-245.708) - Subchapter D. Establishes release reporting, release confirmation and corrective action process requirements for owners and operators of storage tanks. The remaining chapters provide for a certification program for installers and inspectors of storage tanks, permitting of underground and aboveground storage tank systems, technical standards for underground and aboveground storage tanks, and financial responsibility requirements for owners and operators of underground storage tanks.

### C. Guidance Documents:

1. Guidance Manual for Groundwater Monitoring, December 2001.

2. The Pennsylvania Land Recycling Program Technical Guidance Manual.



3. Closure Requirements for Underground Storage Tank Systems in Pennsylvania.
4. Guidance on Commonwealth-Funded Water Supply Response Actions.

(See the following web page for additional guidance and recent updates)

[http://www.portal.state.pa.us/portal/server.pt/community/environmental\\_cleanup\\_brownfields/6049](http://www.portal.state.pa.us/portal/server.pt/community/environmental_cleanup_brownfields/6049)

## DEP's Bureau of Waste Management

### A Statutory Authority:

The Department's source of standards and requirements governing the storage, treatment, processing and disposal of waste are found under the Solid Waste Management Act (35 P.S. §§6018.101-6018.1003).

### B. Regulations:

1. Hazardous Waste Management Regulations, Article VII, Chapters 260a-270a, including incorporated parts of 40 CFR 260-270.
  - (a) 25 Pa. Code, Chapters 260a-266a, 266b and 268a-270a and incorporated parts of 40 CFR Parts 260-266 and 270 - These chapters apply to the identification and listing, generation, transportation, storage, treatment and disposal of hazardous waste and contains the requirements under RCRA for a state to implement a federally approved hazardous waste program.
  - (b) Chapter 264a, Subchapter H, Chapter 265a, Subchapter H, and incorporated parts of 40 CFR Part 264, Subpart H and 40 CFR Part 265, Subpart H - These regulations set forth the minimum requirements for demonstrating sufficient financial responsibility to operate a hazardous waste storage, treatment or disposal facility by providing bond guarantees for the operation, closure, and post-closure requirements of a hazardous waste storage, treatment or disposal facility, and by providing insurance protection for personal injury and property damage arising out of operation of a hazardous waste storage, treatment or disposal facility.
  - (c) Chapter 269a (25 Pa. Code §§269a.1-269a.50) - This chapter sets forth requirements that apply to siting of hazardous waste treatment and disposal facilities. It also divides the criteria for siting hazardous waste treatment and disposal facilities into two phases (Phase I exclusionary criteria, which prohibit the siting of a new hazardous waste treatment or disposal facility in an excluded area delineated under these criteria. Phase II criteria further identifies additional environmental, social, and economic factors which may affect the suitability of a location for a proposed facility, and apply to new hazardous waste treatment or disposal facilities and modifications to existing facilities).
2. Municipal Waste Regulations
  - (a) Chapter 271 (25 Pa. Code §§271.1-271.933) - This chapter sets forth provisions that are generally applicable to all municipal waste management activities, including definitions for all municipal waste chapters (Subchapter A), general requirements for permits and permit applications (Subchapter B), permit review procedures and standards (Subchapter C), financial assurance requirements (Subchapter D), civil penalties and enforcement (Subchapter E), requirements for demonstration facilities (Subchapter F), residual waste as it applies to municipal facilities (Subchapter G), beneficial use (Subchapter I), and beneficial use of

sewage sludge by land application (Subchapter J), which is implemented by the Bureau of Point and Non-Point Source Management.

- (b) Chapter 272 (25 Pa. Code §§272.1-272.543) - This chapter sets forth provisions for municipal waste planning, recycling and waste reduction. It includes general provisions (Subchapter A), host counties (Subchapter B), municipal waste planning (Subchapter C), grants (Subchapter D), municipal recycling programs (Subchapter E), and household hazardous waste collection, transportation and management (Subchapter F).
- (c) Chapter 273 (25 Pa. Code §§273.1-273.521) - This chapter sets forth the Department's application and operating requirements for municipal waste landfills. This chapter is divided into five major parts: Subchapter A (relating to general requirements), Subchapter B (relating to application requirements), Subchapter C (relating to operating requirements), Subchapter D (relating to additional application requirements for special handling and residual wastes) and Subchapter E (relating to additional operating requirements for special handling and residual wastes). This chapter is generally applicable to all operations at a municipal waste landfill, not merely the specific disposal area.
- (d) Chapter 275 (25 Pa. Code §§275.1-275.611) - This chapter establishes the permitting requirements for the land application of sewage sludge. The general operating requirements, requirements for agriculture utilization and additional requirements for land restriction can be found in subchapters C, D, and E, respectively, implemented by the Bureau of Point and Non-Point Source Management.
- (e) Chapter 277 (25 Pa. Code §§277.1-277.322) - This chapter sets forth application and operating requirements for construction and demolition waste landfills. Construction/demolition waste is solid waste resulting from the construction or demolition of buildings and other structures, including but not limited to wood, plaster, metals, asphaltic substances, bricks, block and unsegregated concrete. The term also includes dredging wastes. Subchapter B sets out application requirements, and Subchapter C sets out operating requirements.
- (f) Chapter 279 (25 Pa. Code §§279.1-279.272) - This chapter sets forth permitting requirements for transfer facilities. Application requirements can be found in Subchapter B, and operating requirements are in Subchapter C.
- (g) Chapter 281 (25 Pa. Code §§281.1-281.282) - This chapter contains permitting requirements for composting facilities.
- (h) Chapter 283 (25 Pa. Code §§283.1-283.434) - This chapter concerns resource recovery and other processing facilities. It applies to a number of municipal waste processing facilities, including resource recovery facilities that are not transfer stations or composting facilities. Application and operation requirements are established in Subchapters B and C, respectively, while Subchapters D and E set forth additional application and operating requirements for special handling wastes.

- (i) Chapter 284 (25 Pa. Code §§284.1-284.734) - This chapter sets forth application and operating requirements for a person or municipality that operates an infectious or chemotherapeutic waste facility. The requirements in this chapter are in addition to the applicable requirements in Chapter 271 relating to municipal waste management, general provisions.
- (j) Chapter 285 (25 Pa. Code §§285.1-285.222) - This chapter sets forth standards for storage, collection and transportation of municipal wastes.

### 3. Residual Waste Regulations

- (a) Chapter 287 (25 Pa. Code §§287.1-287.666) - This chapter specifies general procedures, definitions and rules for the generation, management and handling of residual waste.
- (b) Chapter 288 (25 Pa. Code §§288.1 - 288.625) - This chapter sets forth application and operating requirements for Class I, II and III residual waste landfills.
- (c) Chapter 289 (25 Pa. Code §§289.1-289.557) - This chapter sets forth application and operating requirements for Class I and II residual waste disposal impoundments.
- (d) Chapter 291 (25 Pa. Code §§291.1-291.528) - This chapter provides for the application and operation requirements for land application of residual waste.
- (e) Chapter 293 (25 Pa. Code §§293.1-293.262) - This chapter sets forth application and operating requirements for residual waste transfer facilities.
- (f) Chapter 295 (25 Pa. Code §§295.1-295.282) - This chapter provides for the application and operation of residual waste composting facilities.
- (g) Chapter 297 (25 Pa. Code §§297.1-297.272) – This chapter sets forth application and operation requirements for residual waste processing facilities other than transfer or composting facilities. It includes incinerators and other processing facilities.
- (h) Chapter 299 (25 Pa. Code §§299.101-299.232) - This chapter provides standards for the storage of residual waste (Subchapter A), and for collecting and transporting residual waste (Subchapter B).

### C. Guidance Documents:

1. Guidance Manual for Groundwater Monitoring, December 2001.
2. Guidance Manual for Landfill Gas Management.
3. Guidelines for Benthic Macroinvertebrate Stream Surveys for Landfills, June 1988.

4. Management Policy for Ash Residue from Municipal Waste Incineration Resource Recovery Facilities.
5. Application for Storage, Treatment, Disposal of Hazardous Waste - Module #1.
6. Policy and Procedure for the Disposal of Fuel Contaminated Soils, May 1990.
7. Policy and Procedure Establishing Criteria for Use of Uncontaminated Soils, Rock, Stone, Unused Brick and Block, Concrete and Asphalt as Clean Fill.
8. Guidance Manual for Management of Fill.

(See the following website for additional guidance and updates)

<http://www.portal.state.pa.us/portal/server.pt/community/waste/6006>

## **DEP's Bureau of Waterways Engineering and Wetlands**

### A. Statutory Authority

1. The Department's major source of standards and requirements governing water quality are found under the Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §§691.1 – 691.1001).
2. The Dam Safety and Encroachments Act, Act of 1978, P.L. 1375, as amended, 32 P.S. §§693.1 *et seq.*
3. The Flood Plain Management Act, Act of October 4, 1978, P.L. 851, No. 166, 32 P.S. §§679.101 *et seq.*

### B. Regulations:

Numerous requirements are promulgated under the Clean Streams Law, the Stormwater Management Act and the Administrative Code; refer to Title 25 of the Pa. Code. Relevant chapters are as follows:

1. Chapter 102 (25 Pa. Code §§102.1 *et seq.*) - Erosion and Sediment Control. This chapter sets forth provisions that impose requirements on all earth disturbance activities. The Chapter requires planning, implementation, and maintenance of effective erosion and sediment control (E&S) and post construction stormwater management\* best management practices (BMPs) and NPDES Permits for Stormwater Discharges Associated with Construction Activities (NPDES Construction Permits). The Bureau administers the program for the control of erosion and sedimentation, post construction stormwater management, NPDES Construction Permits, and other E&S Permits through delegated County Conservation Districts and DEP Regional Waterways and Wetlands Sections.

\* Note: The administration of Chapter 102, in most cases, has been delegated to County Conservation Districts working in cooperation with the DEP's Bureau of Waterways Engineering and Wetlands.

\* Note: Amendments to Chapter 102, effective November 19, 2010, include provisions for post construction stormwater management, including requirements for long-term operation and maintenance of BMPs. The amendments also include provisions for riparian buffers and forest riparian buffers.

2. Regulations promulgated under the Dam Safety and Encroachments Act; see the *Pennsylvania Bulletin* and Title 25 of the Pa. Code:

Chapter 105 (25 Pa. Code §§105.1 *et seq.*) - This chapter sets forth provisions for the regulation and supervision of dams, reservoirs, water obstructions and encroachments in waters of the Commonwealth, including wetlands.

PADEP Central Office, Bureau of Waterways Engineering and Wetlands, Division of Wetlands, Encroachments and Training develops and coordinates regulation, policy,

program guidance and procedure for the regional implementation of the Chapter 105 Water Obstructions, Encroachments and Wetlands program, and administers the submerged lands license agreement (SLLA) program.

PA DEP Central Office, Bureau of Waterways Engineering and Wetlands, Division of Dam Safety processes dam permits and evaluates the environmental assessments for out-of-scope dams.

PADEP Regional Offices, Waterways and Wetlands Section are responsible for enforcement activities, processing permit applications for water obstructions and encroachments, and for inspecting dams.

Web link to Bureau of Waterways Engineering and Wetlands

[http://www.portal.state.pa.us/portal/server.pt/community/waterways\\_engineering/10499](http://www.portal.state.pa.us/portal/server.pt/community/waterways_engineering/10499)

3. Regulations promulgated under the Flood Plain Management Act; Title 25 of the Pa. Code:

Chapter 106 (25 Pa. Code §§106.1 *et seq.*) - This chapter sets forth provisions for the regulation of obstructions and highway obstructions constructed, owned or maintained by a political subdivision of the Commonwealth, or a public utility, and located in the 100-year floodplain as delineated by FEMA Flood Hazard Boundary Maps.

C. Guidance and Strategies:

Erosion and Sediment Pollution Control Program Manual (Revised April 2012)  
Erosion and Sedimentation Control Plan Development Checklist  
Pennsylvania Stormwater Best Management Practices Manual  
Riparian Forest Buffer Guidance

(See web page for additional guidance and recent updates)

[http://www.portal.state.pa.us/portal/server.pt/community/waterways\\_engineering/10499](http://www.portal.state.pa.us/portal/server.pt/community/waterways_engineering/10499)

## **DEP's Bureau of Point and Non-Point Source Management**

### A. Statutory Authority:

1. Sewage Facilities Act (Act 537), Act of January 24, 1966, P.L. 1535, as amended, 35 P.S. §§750.9 *et seq.* Requirements specific to community and individual sewage treatment and disposal systems.
2. The Department's major source of standards and requirements governing water quality are found under the Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §§691.1 – 691.1001.
3. Solid Waste Management Act (Act 97) (35 P.S. §§6018.101-6018.1003).

### B. Regulations

Regulations promulgated under Act 537.

1. Chapter 71 (25 Pa. Code §§71.1 *et seq.*) – This chapter sets forth regulations requiring Planning Requirements for Sewage Facilities, administration of permits for individual and community sewage systems, and the powers and duties of the Certification Board.
2. Chapter 72 (25 Pa. Code §§72.1 *et seq.*) – This chapter sets forth regulations governing the issuance of permits by local agencies for retaining tanks, and individual and community on-lot sewage systems that handle less than 10,000 gallons per day and utilize subsurface absorption areas for effluent renovation.
3. Chapter 73 (25 Pa. Code §§73.1 *et seq.*) – This chapter sets forth regulations pertaining to site and soil suitability for on-lot sewage disposal, the size and type of treatment tanks, treatment tank effluent dosing and distribution requirements, absorption area requirements, retaining tank standards and experimental and alternative systems.

Regulations promulgated under the Clean Streams Law.

1. Chapter 91 (25 Pa. Code §§91.1 *et seq.*) – This chapter sets forth general provisions for administration and enforcement of Pennsylvania's water pollution control program, and establishes specific application requirements and conditions for the approval and permitting of the construction and operation of waste treatment projects.
2. Chapter 92a (25 Pa. Code §§92a.1 *et seq.*) – This chapter sets forth provisions for the administration of the National Pollutant Discharge Elimination System (NPDES) Program within Pennsylvania, and establishes criteria for the content of NPDES permit applications, effluent standards, monitoring requirements, standard permit conditions, public notification procedures, and other requirements related to the NPDES Program.
3. Chapter 93 (25 Pa. Code §§93.1 *et seq.*) – This chapter set forth general and specific standards for the quality of Pennsylvania's waters and includes specific water quality criteria and designated water use protection for each stream in Pennsylvania. It is reviewed and



updated, as necessary, at least once every 3 years. Section 93.8a establishes Chapter 16 regarding the water quality toxics management strategy statement of policy.

4. Chapter 94 (25 Pa. Code §§94.1 *et seq.*) – This chapter sets forth provisions for municipalities to address the management of hydraulic organic loading from wastewaters discharged into municipal sewage collection conveyance and treatment systems.
5. Chapter 95 (25 Pa. Code §§95.1 *et seq.*) – This chapter sets forth waste treatment requirements for dischargers including developing quality standards for discharges to acid impregnated streams and acid-bearing waters. This chapter was revised on August 21, 2010 to include specific requirements for new or expanded facilities accepting wastewater from natural gas drilling activities and other sources high in Total Dissolved Solids.
6. Chapter 96 (25 Pa. Code §§96.1 *et seq.*) – This chapter describes water quality standards implementation including Total Maximum Daily Loads (TMDLs) and Water Quality-Based Effluent Limitations (WQBELs).

Regulations promulgated under Act 97.

1. Chapter 271 (25 Pa. Code §§271.901-271.933) Subchapter J – This chapter provides for the general and individual land application of sewage sludge permits for the beneficial use of sewage sludge by land application.
2. Chapter 275 (25 Pa. Code §§275.1-275.611) – This chapter provides for specific permitting requirements for sewage sludge application relating to agricultural utilization, land reclamation and additional requirements for surface land application.

C. Guidance Documents:

1. Industrial Waste Manual
2. Domestic Wastewater Facilities Manual
3. Manual for Land Application of Treated Sewage and Industrial Waste Water
4. Technical Guidance for NPDES Permitting of Landfill Leachate Discharges
5. Wastewater Treatment Technology Assessment for Municipal Waste Landfills
6. Water Quality Antidegradation Implementation Guidance
7. Combined Sewer Overflow (CSO) Strategy

(See the following web page for additional guidance and recent updates)

[http://www.portal.state.pa.us/portal/server.pt/community/drinking\\_water\\_and\\_facility\\_regulation/10535](http://www.portal.state.pa.us/portal/server.pt/community/drinking_water_and_facility_regulation/10535)

## **DEP's Bureau of Conservation and Restoration**

### A. Statutory Authority:

The Department's major source of standards and requirements governing water quality are found under the Clean Streams Law (35 P.S. §§691.1 – 691.1001).

### B. Regulations:

Numerous requirements are promulgated under the Clean Streams Law, Stormwater Management Act and the Administrative Code; refer to the *Pennsylvania Bulletin* and Title 25 of the Pa. Code. Relevant chapters are as follows:

1. Chapter 102 (25 Pa. Code §§102.1 *et seq.*) - Erosion and Sediment Control and Stormwater Management. This chapter sets forth provisions that impose requirements on all earth disturbance activities. The Chapter requires planning, implementation, and maintenance of effective erosion and sediment control and post construction stormwater management\* best management practices (BMPs) and NPDES Permits for Stormwater Discharges Associated with Construction Activities (NPDES Construction Permits). The Bureau administers the program for the control of erosion and sedimentation at agricultural operations.

The administration of Chapter 102, in most cases, has been delegated to County Conservation Districts working in cooperation with the DEP.

\* Note: Amendments to Chapter 102, effective November 19, 2010, include provisions for post construction stormwater management, including requirements for long-term operation and maintenance of BMPs. The amendments also include provisions for riparian buffers and forest riparian buffers.

### C. Guidance and Strategies:

Concentrated Animal Feeding Operations (CAFO) Strategy

(See the following web page for additional guidance and recent updates)

[http://www.portal.state.pa.us/portal/server.pt/community/watershed\\_management/10593](http://www.portal.state.pa.us/portal/server.pt/community/watershed_management/10593)

## **DEP's Bureau of Safe Drinking Water**

### A. Statutory Authority:

Pennsylvania Safe Drinking Water Act, Act of May 1, 1984, P.L. 206, 35 P.S. §§721.1 *et seq.*

### B. Regulations:

Regulations promulgated under the Safe Drinking Water Act; refer to the *Pennsylvania Bulletin* and Title 25 of the Pa. Code.

Chapter 109 (25 Pa. Code §§109 *et seq.*) - This chapter sets forth drinking water quality standards at least as stringent as federal standards: Maximum Contaminant Levels (MCLs), and additional state requirements: Secondary Maximum Contaminant Levels (SMCLs) for public water systems including permit design and construction, source quality and siting requirements. Chapter 109 also sets requirements for bottled water and vended water systems, retail water facilities and bulk water hauling systems.

### C. Guidance Documents:

The guidance for limiting unregulated contaminants in public water supplies is referenced in Section 109.203 and in the following:

1. Health Effects and Risk Management - Safe Drinking Water Program Staff Handbook. (DEP #383-0400-104)  
<http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-47524/383-0400-104.pdf>

Public water systems shall supply finished water that complies with the maximum unregulated contaminant concentrations (MUCC) determined as follows:

- (a) The MUCC will be the concentration at which EPA has proposed to set or is considering setting a primary MCL for the contaminant; or
- (b) If EPA has not established a concentration as set forth in (a) above, the MUCC will be the concentration associated with a lifetime cancer risk of  $10^{-6}$  for carcinogenic contaminants or the concentration equal to the lifetime health advisory concentration for non-carcinogenic contaminants, provided that this concentration is equal to or greater than the practical quantitation level and achievable through the use of available treatment technology; or
- (c) If the concentration specified in (b) above is not equal to or greater than the practical quantitation level or is not achievable through the use of available treatment technology, the MUCC will be set at the lowest concentration these limiting factors will allow.

2. DEP Public Water Supply Manual

In an effort to develop, maintain and attain the above drinking water quality requirements, the Bureau has developed a Public Water Supply Manual. The Manual

contains siting, treatment design and construction standards that are acceptable to the Department.

(See the following web page for additional guidance and recent updates)

[http://www.portal.state.pa.us/portal/server.pt/community/drinking\\_water\\_management/10543](http://www.portal.state.pa.us/portal/server.pt/community/drinking_water_management/10543)

## **DEP's Bureau of Air Quality**

### A. Statutory Authority:

The Department's major source of standards and requirements governing air quality are found under the Air Pollution Control Act, Act of January 8, 1960, P.L. 2119, 35 P.S. §§4001, *et seq.*

### B. Regulations:

Numerous requirements are promulgated under the Air Pollution Control Act; refer to the *Pennsylvania Bulletin* and Title 25 of the Pa. Code. Relevant chapters are as follows:

1. Chapter 122 (25 Pa. Code §§122.1 *et seq.*) - This chapter on "National Standards of Performance For New Stationary Sources" adopts federal New Source Performance Standards (NSPS) by reference.
2. Chapter 123 (25 Pa. Code §§123.1 *et seq.*) - This chapter on "Standards for Contaminants" sets forth requirements for fugitive emissions, including open burning and demolition activities; specific limitations for particulate matter sulfur dioxide, odor, and visible emissions.
3. Chapter 124 (25 Pa. Code §§124.1 *et seq.*) - This chapter on "National Emission Standards for Hazardous Air Pollutants" adopts federal NESHAP standards by reference.
4. Chapter 127 (25 Pa. Code §§127.1 *et seq.*) - This chapter on "Construction, Modification, Reactivation and Operation of Sources" requires the use of Best Available Technology (BAT) for control of new sources, plan approval and operating permit requirements, and special requirements for sources in nonattainment areas.

25 Pa. Code §§127.12(a)(5) requires that new air contaminant sources reduce emissions to the minimum attainable level through the use of BAT. Applicants are responsible for demonstrating that BAT will be utilized on the sources in its plan approval application. BAT is defined in 25 Pa. Code 121.1. In order to determine that a plan approval application has demonstrated that the source will control emissions of air contaminants to the appropriate level, the Department needs to review each plan approval application on a case-by-case basis. Source-specific factors can impact on what devices, methods or techniques are needed to control emissions. The Department bases its case-by-case determinations of BAT on the engineering judgment of the plan approval application reviewers. The Department needs to review each plan approval application to apply the BAT requirement. If plan approvals (construction permits) will not be required, the Department will need to evaluate plan approval type technical information regarding the source to make a BAT determination.

5. Chapter 129 (25 Pa. Code §§129.1 *et seq.*) - This chapter on "Standards for Sources" governs open burning and specific industrial sources.
6. Chapter 131 (25 Pa. Code §§131.1 *et seq.*) - This chapter on "Ambient Air Quality Standards" adopts federal ambient air quality standards plus sets forth additional state standards for settled particulate, beryllium, fluorides, and hydrogen sulfide.

7. Chapter 135 (25 Pa. Code §§135.1 *et seq.*) - This chapter on “Reporting of Sources” requires the submission of data necessary for the identification and quantification of potential and actual air contaminant emissions.
8. Chapter 137 (25 Pa. Code §§137.1 *et seq.*) - This chapter on “Air Pollution Episodes” sets forth requirements for standby plans and the implementation of emission reduction procedures to prevent the excessive buildup of air pollutants during air pollution episodes.
9. Chapter 139 (25 Pa. Code §§139.1 *et seq.*) - This chapter on “Sampling and Testing” sets forth requirements for sampling of facilities, sampling methods and analytical procedures.
10. Chapter 141 (25 Pa. Code §§139.1 *et seq.*) - This chapter on “Variances and Alternative Standards” establishes that the Department may impose more stringent standards than set forth in other Bureau of Air Quality regulations where the standard 1) is related to achieving ambient air quality standards, 2) can be achieved through BAT, or 3) is necessary to protect the public health, safety or welfare.

C. Guidance Documents:

1. Hazardous Waste and Petroleum Products Contamination Cleanup Projects require plan approval and BAT for air strippers and other equipment designed to remove volatile contaminants from soil, water, and other materials.
2. Air Quality Permitting Criteria Including BAT for Municipal Waste Incineration Facilities.
3. Air Quality Permitting Criteria Including BAT for Hospital/Infectious Waste Incineration Facilities.
4. Interim Operating Guidance for Air Toxic Substances provides a consistent procedure for permitting new and modified sources that emit air toxic substances. The guidance specifies how to evaluate sources, based mainly on the chronic (annual) low-level exposure air quality guidelines for approximately 99 compounds. It also requires an acute (weekly) exposure assessment for formaldehyde and nickel compounds. This guidance is intended to provide a framework to assess the potential for public health hazards from the emissions of air toxic substances. The guidance provides criteria for the acceptance/rejection of plan approval applications for air contaminant sources. The requirements are both site and source specific, being established on a case-by-case basis.
5. Air Quality Permitting Criteria for Remediation Projects Involving Air Strippers and Soil Decontamination Units. This document provides a permit exemption policy for remediation projects involving the Bureau of Air Quality.
6. Air Quality Permitting Criteria Including BAT Criteria for Municipal Waste Landfills. This document specifies plan approval requirements and guidelines to satisfy BAT requirements as established by 127.12(a)(5) for municipal waste landfills.

7. Multi-pathway Risk Assessment Guidelines. This document specifies risk assessment methodology for the burning of hazardous waste. These guidelines are applicable to commercial hazardous waste incinerators, boilers, and industrial furnaces subject to 40 CFR Parts 260-271 and DEP's Chapters 126 and 264.

(See the following web page for additional guidance and recent updates)

<http://www.portal.state.pa.us/portal/server.pt/community/air/6000>

## **DEP's Bureau of Radiation Protection**

### A. Statutory Authority:

The Radiation Protection Act, Act of July 10, 1984, P.L. 688, 35 P.S. §§7110.101 *et seq.*

### B. Regulations:

Several regulations promulgated under the authority of the Atomic Energy Development and Radiation Control Act; see the *Pennsylvania Bulletin* and Title 25 of the Pa. Code.

1. Chapter 215 (25 Pa. Code §§215.1 *et seq.*) - This chapter sets forth general provisions for the protection of public health and safety for all persons who use, manufacture, produce, transport, transfer, receive, acquire, possess or dispose of any radiation source.
2. Chapter 217 (25 Pa. Code §§217.1 *et seq.*) - This chapter sets forth provisions for application and licensing requirements for persons who manufacture, produce, transport, transfer, receive, own, acquire, possess or dispose of any radioactive material. In order to more efficiently, uniformly and safely control radioactive material, Pennsylvania has entered into an Agreement with the U.S. Nuclear Regulatory Commission to expand its authority over the licensing and regulation of Byproduct, Source and Special Nuclear Material.
3. Chapter 219 (25 Pa. Code §§219.1 *et seq.*) - This chapter sets forth standards for protection against ionizing radiation and provisions for individual exposure limits and safety requirements.
4. Chapter 230 (25 Pa. Code §§230.1 *et seq.*) - This chapter establishes requirements for packaging, preparation for shipment and transportation of radioactive material. This chapter applies to a person who transports radioactive material or delivers radioactive material to a carrier for transport.

### C. Additional Requirements:

1. Chapter 403 - sets forth the Pennsylvania Department of Transportation requirements for transporting radioactive materials.
2. The Nuclear Regulatory Commission should be notified if high-level wastes are involved.

(See the following web page for additional guidance and recent updates)

[http://www.portal.state.pa.us/portal/server.pt/community/radiation\\_protection/6004](http://www.portal.state.pa.us/portal/server.pt/community/radiation_protection/6004)



## **DCNR's Bureau of Topographic and Geologic Survey**

### A. Statutory Authority:

1. The Water Well Drillers License Act (610), Act of May 29, 1956, P.L. 1840, 32 P.S. §645.1 *et seq.*
2. Act 18 of 1995. Transfers administrative duties to the Department of Conservation and Natural Resources.

### B. Regulations:

Requirements promulgated under the Water Well Driller License Act; see the *Pennsylvania Bulletin* and Title 25 of the Pa. Code:

Chapter 47 (17 Pa. Code §§47.1-47.8) - This chapter sets forth requirements for the licensing of water well drillers, prevention of pollution of underground waters, submittal of well construction records and well abandonment notification.

(See the following web page for additional guidance and recent updates)

<http://www.dcnr.state.pa.us/topogeo/index.aspx>

## **DEP's Office of Oil and Gas Management**

### A. Statutory Authority:

1. The Oil and Gas Act, as amended, 58 Pa.C.S. § 3201 – 3274 (2012 Oil and Gas Act). The 2012 Oil and Gas Act is the fundamental law governing activities for the oil and gas industry. It sets forth permitting, drilling, operating, casing, plugging, reporting, financial responsibility, gas storage, well location restrictions, and other requirements.
2. The Coal and Gas Coordination Act, Act of December 18, 1984, P.L. 1069, 58 P.S. §§501 *et seq.* The Coal and Gas Coordination Act coordinates the activities of coal mines and gas wells dealing with non-conservation wells that penetrate a working coal seam.
3. The Oil and Gas Conservation Law of 1961, Act of July 25, 1961, P.L. 825, 58 P.S. §§401 *et seq.*
4. The Clean Streams Law (35 P.S. §§691.1-691.1001).
5. The Solid Waste Management Act (35 P.S. §§6018.101-6018.1003).
6. The Dam Safety and Encroachment Act, (32 P.S. §§693.1 – 693.27).
7. Article XIX-A of The Administrative Code of 1929 (71 P.S. §§510-1 – 510-108).

### B. Regulations:

1. Chapter 78 (25 Pa. Code §§78.1 *et seq.*) - This chapter regulates the drilling and production of oil and gas wells. Included in this chapter are regulations concerning environmental protection and well drillings, operations and plugging.
2. Chapter 79 (25 Pa. Code §§79.1 *et seq.*) - This chapter regulates conservation wells, those wells which penetrate the Onondaga or deeper horizon, or are drilled to greater than 3,800 ft.
3. Chapter 105 (25 Pa. Code §§105.1 *et seq.*) - This chapter regulates water dams, obstructions and encroachments in the Commonwealth to protect health, safety, welfare and property of the people.
4. Chapter 102 (25 Pa. Code §§102.1 *et seq.*) - This chapter regulates earth disturbance activities which have the potential to cause accelerated erosion and sedimentation to protect, maintain, reclaim and restore water quality.

C. Guidance Documents:

1. Addressing Spills and Releases and Oil and Gas Well Sites and Access Roads, Document No. 800-5000-001
2. DEP “Oil and Gas Operators Manual,” Document No. 550-0300-001

Note: The sections of the acts, regulations and guidelines, listed above, which are most likely to be used as ARARs in a cleanup response action are the requirements for plugging of oil and gas wells, as follows:

- (a) 58 P.S. §§601.210 - Plugging requirements; and 610.211 - Alternative methods
- (b) 25 Pa. Code §§78.91-.98 - Well Plugging
- (c) 25 Pa. Code Chapter 78, Subchapter C, “Environmental Protection Performance Standards.”

(See the following web page for additional guidance and recent updates)

[http://www.portal.state.pa.us/portal/server.pt/community/office\\_of\\_oil\\_and\\_gas\\_management/20291](http://www.portal.state.pa.us/portal/server.pt/community/office_of_oil_and_gas_management/20291)

## **DEP's Bureau of Mining and Reclamation**

### A. Statutory Authority:

1. The Surface Mining Conservation and Reclamation Act, Act of May 31, 1945, P.L. 1198, as amended, 52 P.S. §§1396.1 *et seq.*
2. The Coal Refuse Disposal Control Act, Act of September 28, 1968, P.L. 1080, as amended, 52 P.S. §§30.51 *et seq.*
3. The Bituminous Mine Subsidence and Land Conservation Act, Act of April 22, 1966, P.L. 30-1, as amended, 52 P.S. §§1406.1 *et seq.*
4. The Administrative Code, Act of April 9, 1929, P.L. 177, as amended, 71 P.S. §§510 *et seq.*
5. The Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §§691.1 – 691.1001.
6. Noncoal Surface Mining Conservation and Reclamation Act, Act of December 19, 1984, P.L. 1093, 52 P.S. §§3301 *et seq.*

### B. Regulations:

Regulations promulgated under the above statutes (see Title 25 of the Pa. Code):

1. Chapter 77 (25 Pa. Code §§77.1 *et seq.*) - This chapter sets forth procedures and regulations for non-coal mining activities and establishes informational requirements for permit applicants, siting criteria, and operational standards.
2. Chapter 86 (25 Pa. Code §§86.1 *et seq.*) - This chapter sets forth general permit application requirements for all coal mining activities, permit procedures and siting criteria.
3. Chapter 87 (25 Pa. Code §§87.1 *et seq.*) - This chapter sets forth informational requirements to support permit applications for bituminous surface mining operations and establishes land reclamation and environmental protection standards, including requirements for the protection of the hydrologic balances.
4. Chapter 88 (25 Pa. Code §§88.1 *et seq.*) - This chapter sets forth requirements governing anthracite surface and deep mining activities. Chapter 88 establishes mine siting criteria and environmental protection performance standards, including requirements for the protection of the hydrologic balance, proper closure of mines, and subsidence control.
5. Chapter 89 (25 Pa. Code §§89.1 *et seq.*) - This chapter governs bituminous deep mining activities. Chapter 89 establishes mine siting criteria and environmental protection performance standards, including requirements for the protection of the hydrologic balance, proper closure of mines, and subsidence control.

6. Chapter 90 (25 Pa. Code §§90.1 *et seq.*) - This chapter sets forth requirements regarding coal refuse disposal in surface and deep mines, including provisions for application requirements and environmental performance standards.

C. Guidance Documents:

1. Bureau of Mining and Reclamation Technical Guidance Documents
2. Engineering Manual for Coal Mining Operations

(See the following web page for additional guidance and recent updates)

<http://www.portal.state.pa.us/portal/server.pt/community/mining/6002>

## **DEP's Bureau of Abandoned Mine Reclamation**

No regulations. This Bureau should be notified of Superfund site work in abandoned mine areas.

Alternatively, if staff in the Bureau become aware of suspicious waste products (drums, odors, visual evidence of potential residual or hazardous wastes, etc.) during development/design of abandoned mine reclamation projects, they will notify the appropriate regional staff for investigation, and the Bureau will suspend the project until such time as cleared by the Region.

This is not meant to apply to those potential reclamation projects containing illegally dumped municipal trash which, depending upon the amount and type present, is normally hauled to a permitted landfill by the Bureau's contractor during construction of the project.

(See the following web page for additional guidance and recent updates)

[http://www.portal.state.pa.us/portal/server.pt/community/abandoned\\_mine\\_reclamation/13961](http://www.portal.state.pa.us/portal/server.pt/community/abandoned_mine_reclamation/13961)

## **Other Potential Applicable or Relevant and Appropriate Requirements**

Pennsylvania Scenic Rivers Act, Act of Dec. 5, 1972, P.L. 1277, as amended, 32 P.S. §§820.21 *et seq.*

Historic Preservation Act of Nov. 22, 1978, P.L. 1160, as amended, 71 P.S. §§1047.1 *et seq.*

Implementation of the History Code: Policy and Procedures for Applicants for DEP Permits and Plan Approvals (37 Pa. C.S.A., Section 101 *et seq.* and Article 1, Section 27)

The Fish and Boat Code, Act of Oct. 16, 1980, P.L. 996, as amended, 30 Pa. C.S. §§101 *et seq.*

The Game and Wildlife Code, Act of July 8, 1986, P.L. 1225, 34 Pa. C.S. §§101 *et seq.*

The Soil Conservation Law, Act of May 15, 1945, P.L. 547, as amended, 3 P.S. 849

Pennsylvania Dept. of Transportation, Act of June 1, 1945 (P.L. 1242, No. 428) (36 P.S. §§670-411, 670-420, 670-421 and 670-702)

Pennsylvania State Police, Title 37, Part I, Chapters 11 and 13, Flammable and Combustible Liquids

APPENDIX A

FEDERAL AND STATE STATUTE/REGULATION GUIDE

Program	Federal		State		Roles of Federal and State Governments
	Statute	Regulation	Statute	Regulation	
Water Pollution	33 U.S.C. §1251 42 U.S.C. §6901	40 C.F.R. Parts 100-149 and 400-471 40 C.F.R. Part 280	35 P.S. §691.1 <i>et seq.</i> 35 P.S. §751.1 <i>et seq.</i> 35 P.S. §6021.1 <i>et seq.</i>	25 Pa. Code, Chapter(s) 91, 92 Chapter(s) 71, 72, 73 Chapter(s) 94, 95, 96 Chapter 245	Federal government's role in water pollution consists almost exclusively of oversight when NPDES permits have been delegated to a state as they have in PA. PA administers permit programs for direct discharges, and in conjunction with local government to administer the septic tank program. PA implements the Underground Storage Tank Program.
Air Pollution	42 U.S.C. §7401 <i>et seq.</i>	40 C.F.R. Parts 50-87	35 P.S. §4001 <i>et seq.</i>	25 Pa. Code, Chapter(s) 127, 129, 131, 135, 137, 139, 141, 143 Chapter(s) 122-124	Federal Government adopts National Ambient Standards, certain New Source Standards, and certain Hazardous Waste Standards and acts in major oversight role of state activities. PA develops state implementation plan to meet federal ambient standards and issues permits for point sources. Federal government retains some enforcement authority but major authority exercised by the state.
Mining	30 U.S.C. §1201 <i>et seq.</i>	30 C.F.R. Parts 761.955	52 P.S. §1396 <i>et seq.</i> 52 P.S. §1406.1 <i>et seq.</i>	25 Pa. Code, Chapter(s) 86-90	State has been delegated authority to implement mining law with the Department of Interior playing oversight role.
Waste Management (Hazardous, Residual & Municipal Waste except Superfund)	42 U.S.C. §6901 <i>et seq.</i> 15 U.S.C. §2601 <i>et seq.</i>	40 C.F.R. Parts 240-280 40 C.F.R. Parts 702-799	35 P.S. §6018.101 <i>et seq.</i>	25 Pa. Code, Chapters 260a-270a Chapters 287-299 Chapters 271-285	State implements RCRA after federal delegation. Pennsylvania has been delegated most but not all of federal RCRA. State implements independent program for municipal and residual waste.
Drinking Water	42 U.S.C. §300f-300j	40 C.F.R. Parts 141-147	35 P.S. §721.1 <i>et seq.</i>	25 Pa. Code, Chapter(s) 109	State implements program after federal delegation. Federal role in Pennsylvania consists largely of oversight.
Superfund/Hazardous Sites Cleanup Act UST Corrective Action	42 U.S.C. §9601 <i>et seq.</i>	40 C.F.R. Parts 300, 306	35 P.S. §6020.101 <i>et seq.</i> 35 P.S. §6021.101 <i>et seq.</i>	Chapters 245, 250	Federal superfund implemented by federal government. State plays supporting role. State statute created an independent state program, (Hazardous Sites Cleanup Act). State implements UST Corrective Action Process.
Land Recycling and Environmental Remediation Standards Act	Small Business Liability Relief and Brownfields Revitalization Act Public Law 107-118, Amends 42 U.S.C. 9601		35 P.S. §6026.101 <i>et seq.</i>	Chapter 250	Land Recycling Act provides incentives for voluntary cleanup, funding for abandoned site redevelopment and stipulates cleanup standards. Federal Program provides for liability relief for small-volume contributors and provides funding for assessment and cleanup of Brownfield properties.
Wetlands Protection	33 U.S.C. §404 33 U.S.C. §401	33 C.F.R. Parts 300, 306	35 P.S. §693.1 <i>et seq.</i>	25 Pa. Code, Chapter(s) 105	Both state and federal permits are required to fill wetlands.
General Environmental Impact Analysis	42 U.S.C. §4321		PA Const. Art 1, §27	Self-executing	Federal government is required under NEPA to develop environmental impact statement for federal actions. Constitution requires that state and local government comply with environmental provision of constitution.
Flood Plain Management	42 U.S.C. §4001	44 C.F.R. Part 60	32 P.S. §679.101 <i>et seq.</i>	25 Pa. Code, Chapter(s) 106 16 Pa. Code, Chapter(s) 38	State law requires that municipalities pass regulations that comply with federal law.
Dam Safety & Encroachment	33 U.S.C. §404	33 C.F.R. Part 320, 330	32 P.S. §693.1 <i>et seq.</i>	25 Pa. Code, Chapter(s) 105	Army Corps of Engineers issues "404" permits in wetlands. Pennsylvania has independent authority to issue permits.



APPENDIX A

FEDERAL AND STATE STATUTE/REGULATION GUIDE

Program	Federal		State		Roles of Federal and State Governments
	Statute	Regulation	Statute	Regulation	
Oil & Gas Management	--	--	58 P.S. §601.101 <i>et seq.</i> 58 P.S. §501, <i>et seq.</i> 58 P.S. §471, <i>et seq.</i>	25 Pa. Code, Chapter(s) 78, 79	No express federal program except to the extent groundwater is regulated under other federal statutes.
Stormwater	33 U.S.C. §402	40 C.F.R. §122.21	32 P.S. §680.1 <i>et seq.</i>	25 Pa. Code, Chapter(s) 111, 102 and 92	Federal program implemented by the state in conjunction with the NPDES program. State law requires municipalities to prepare stormwater management plans.
Radiation Protection	44 U.S.C. §1507	10 C.F.R. 0.735-1	35 P.S. 7110.1 <i>et seq.</i>	Chapters 215, 217, 219, 230	Federal Program implemented by the state. High level radioactive waste requires federal NRC notification.

**APPENDIX B**

**LOCATION-SPECIFIC  
APPLICABLE OR RELEVANT APPROPRIATE REQUIREMENTS**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>
Property line isolation distances	Must maintain a 50 ft. buffer zone between property line and treatment, storage, disposal activities unless variance is granted. NOTE: Ignitables/Reactives in containers - no variance allowed.	Activities within regulated distance (50 ft.) of property line	PA SWMA, Act 97 Chapters 264a or 265a and Chapter 288
Within 1 mile of a fault displaced in Holocene time	Disposal prohibited unless demonstration is made that unit is designed to withstand fault activity.	Disposal within 1 mile of fault. NOTE: Disposal 1 mile or more from a fault acceptable with no demonstration.	PASWMA, Act 97 Chapters 269a
Within 100-year floodplain	No treatment or disposal within 100 yr. floodplain. Storage units must withstand 100 yr. flood forces.	None	PASWMA, Act 97 Chapters 269a and 288
	Obstructions must comply with Chapter 106 requirements	Construction, earthmoving, filling, excavation within 100 yr. floodplain	Floodplain Management Act of 1978, PL 851, No. 166 Dam Safety & Encroachment Act of 1978, PL 1375
Within area where action may cause irreparable harm, loss, or destruction of significant artifacts	Coal Mining Prohibited	Surface Mining and valid existing rights	Surface Mining Conservation & Reclamation Act
	Prohibition of adverse environmental visual or traffic impacts - must provide impact analysis	Activity within one mile of property owned by PA Historical & Museum Commission. Activity within 1/4 mile of site listed in PA Inventory of Historic Places or in PA Archaeological Site.	PA SWMA, Act 97 Chapter 269a  PA History Code (37 Pa. Cons. Stat.)
Historic project owned or controlled by Federal or State agency	Prohibition of adverse environmental, visual or traffic impacts must provide impact analysis. Treatment & Disposal prohibition.	Activity within one mile of property owned by PA Historical & Museum Commission; activity within 1/4 mile of site listed in PA Inventory of Historic Places; activity in PA Archaeological Site Commission; or activity on National Register of Historic Places.	PA SWMA, Act 97 Chapter 269a  PA History Code (37 Pa. Cons. Stat.)
	Coal Mining prohibited unless approved jointly by DEP and agency with jurisdiction over the property/place.	Surface Mining/Valid Existing Rights	Surface Mining Conservation & Reclamation Act

**APPENDIX B**

**LOCATION-SPECIFIC  
APPLICABLE OR RELEVANT APPROPRIATE REQUIREMENTS**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>
Critical habitat upon which endangered species or threatened species depends	Action to conserve endangered species or threatened species including consultation with DCNR's Bureau of Forestry.	Determination of presence of endangered or threatened species	Wild Resource Conservation Act, PL 547, No. 170, 32 P.S. 5301-5314
Wetlands	No treatment or disposal within wetland area. Isolation distances may apply.	Must be a wetland area as defined by state and federal law	PA SWMA, Act 97, Chapters 269a and 288
	Obstructions and encroachments must comply with Chapter 105 requirements.		Dam Safety & Encroachments Act of 1978, PL 1375
Wilderness Area	Prohibition of adverse environmental, visual or traffic impacts - must provide impact analysis. No disposal or treatment in landmark Areas.	Activity within one mile of wild, natural or landmark area	PA SWMA, Act 97, Chapters 269a
Wildlife refuge, fish hatchery	Same as wilderness area, also no disposal or treatment in national or state refuges or hatcheries.	Activity within one mile of wild, natural or landmark area	PA SWMA, Act 97, Chapters 269a
Area affecting stream or river	Obstructions and encroachments must comply with Chapter 105 requirements.	Obstruction or encroachment at or in regulated waters of the state	Dam Safety & Encroachments Act of 1978, PL 1375
	Water Quality Criteria must be met in stream.	Activity potentially affecting stream or river	PASWMA, Act 97, Chapters 269a and 288 25 Pa. Code 93.4, 93.7, 93.8(a), 93.9; 25 Pa. Code 16
Within area affecting national or state wild, scenic, or recreational river	Prohibit activities that may create adverse environmental, visual or traffic impacts on a river.	River or river corridor designated pursuant to the PA Scenic Rivers Act or listed as a 1-A priority for study by DEP	The PA Scenic River Act and all subsequent legislation designating waterways as scenic. PA SWMA, Act 97, Chapter 269a
Within coastal zone	Conduct activities consistent with state program requirements.	Activities affecting designated PA Coastal Zones	Final Program EIS, PA Coastal Zone Management Program, 1980
Agricultural areas	Treatment and disposal prohibited in agricultural areas established under PA Agricultural Area Security Law or in farmland classified as Class I agricultural land by SCS.	Area must be designated by Soil Conservation Service or under PA Agricultural Area Security Law.	PA SWMA, Act 97, Chapter 269a

**APPENDIX B**

**LOCATION-SPECIFIC  
APPLICABLE OR RELEVANT APPROPRIATE REQUIREMENTS**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>
Exceptional value watershed	Treatment or disposal prohibited.	Must be designated exceptional value.	PA SWMA, Act 97 Chapter 269a
	Impact analysis on pending designated exceptional value watershed.	DEP/EQB must have received a written request for designation	PA SWMA, Act 97 Chapter 269a
	Maintain existing quality.	Designated in 25 Pa. Code Section 93.9	25 Pa. Code 5.1(c).
Oil and gas wells	Disposal prohibited over active or inactive oil and gas wells or gas storage areas located within or beneath site. If abandoned facilities exist, <u>but not below disposal unit</u> , need analysis of expected subsurface discharges for approval of unit.	Active, inactive, or abandoned oil and gas wells, as well as gas areas, must meet definition in Oil & Gas Act of 1984	PA SWMA, Act 97 Chapter 269a
Underlain by fractured bedrock	Disposal prohibited over areas of coarse unconsolidated deposits including heavily fractured bedrock. Other activities acceptable if subsurface conditions pose no threat.	Existence of geologic condition	PA SWMA, Act 97 Chapter 269a
Underlain by carbonate or limestone formations (>5 feet)	Disposal prohibited over these formations: Areas mapped by PA Geologic Survey.	Formations must be >5 feet thick and be the topmost geologic unit.	PA SWMA, Act 97 Chapters 269a and 288
Landslide prone area	Treatment and disposal activities: must provide impact analysis on unit design with respect to landslide.	Unit must be in or adjacent to landslide prone area.	PA SWMA, Act 97 Chapter 269a
Within 5 miles of Earthquake epicenter	Treatment and disposal activities: demonstrate unit design can withstand seismic activities.	Earthquake epicenter mapped by USGS or PA Geologic Survey	PA SWMA, Act 97 Chapter 269a
Deep mines/Surface mines	Treatment and disposal activities: provide analysis of subsidence risk. Further mining of minerals providing support of the unit is prohibited.	Existence of deep or surface mines and supporting data for future mining areas.	PA SWMA, Act 97 Chapters 269a and 288

**APPENDIX B**

**LOCATION-SPECIFIC  
APPLICABLE OR RELEVANT APPROPRIATE REQUIREMENTS**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>
State Forest Natural Areas State Forest Wild Areas	Area must be administered in such a manner so as to leave it unimpaired as a Natural or Wild Area and to preserve the unique features for which it was designated.	Commonwealth-owned area designated as a Natural or Wild Area	Administrative Code of 1929, PL 177 and 1902A  PA SWMA, Act 97 Chapter 269a
Public or Private Wild Plant Sanctuary	Area must be administered in such a manner as to leave it unimpaired as a wild plant sanctuary, and to preserve the unique habitat values for which it was designated.	Area designated by DEP Bureau of Forestry as a Public or Private Wild Plant Sanctuary	Wild Resource Conservation Act, PL 597, No. 170, 32 P.S. 5301-5314; PA SWMA, Act 97 Chapter 269a
Park, Forest, Gameland, Appalachian Trail (or other state Trail)	Prohibit activities that may create adverse environmental, visual or traffic impacts.	Within one mile of facility	PA SWMA, Act 97 Chapter 269a
Rare, threatened, endangered species habitat	Prohibition of adverse impacts on species or habitat.	Habitat or species protected by Federal Endangered Species Act, Wild Resource Conservation Act, or recognized by PA Fish & Game Commissions	PA SWMA, Act 97 Chapter 269a
Water Supply Area	Disposal prohibited unless permanent alternative supply provided and consent obtained.	Regulated isolation distances between wells, spring and/or supply intake	PA SWMA, Act 97 Chapters 269a and 288
40 ft. setback from building	Containers holding ignitables and reactives must maintain a 40 ft. setback from a building for outdoor storage.	Outdoor storage in containers	PA SWMA, Act 97 Chapters 264a and 265a

**APPENDIX C**

**ACTION-SPECIFIC  
APPLICABLE OR RELEVANT APPROPRIATE REQUIREMENTS**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>
Air stripping	Use BAT, Meet "Haz. Waste and Petroleum Products Contamination Clean-up" Procedures, and Air Toxics Substance Guidance limits.		Air Pollution Control Act (APCA) Chapter 127
Capping (see also Closure with Waste in Place for additional associated requirements)	Meet design and performance standards, final grade; cover soils USDA class loams, permeability requirements for cap and liner. Vegetation based on PennDOT Form 408, or Penn State Agronomy Guide.		PA SWMA, Act 97 Chapters 264a or 265a and 288
Clean Closures (removal of waste and contaminated soils - no groundwater contamination)	Demonstrate no subsoil contamination and no groundwater contamination from that unit. Use sampling grid to determine sampling locations.		PA SWMA, Act 97 Chapters 264a or 265a Chapters 245, 250
Closure with Waste in Place (including capping and groundwater monitoring, pumping)	Stabilize waste to support cap. Must withstand dynamic and static loading. Install gas monitoring and venting systems if appropriate. Install groundwater monitoring system per aquifer. Prepare and implement assessment and abatement plan if contamination is detected. Need approval of groundwater treatment plant design, post-closure monitoring.		PA SWMA, Act 97 Chapters 264a or 265a and 288  Clean Streams Law
Closure of Land Treatment Units	Establish/Maintain Vegetative cover; maintain run-on, run-off control, wind dispersal; prohibit growth of food chain crops.		PA SWMA, Act 97 Chapters 264a or 265a and 288
Consolidation within a Unit	Closure of old units: either clean closure or capping.		PA SWMA, Act 97 Chapters 264a or 265a
Consolidation between Units	Disposal in a different unit prohibited unless unit meets "permit" standards. Old unit must meet closure standards.		PA SWMA, Act 97 Chapters 264a or 265a
Container Storage	Meet spacing and set back requirements, secondary containment. Containers must be in good condition and labeled. Cannot store over 1 yr without cause.		PA SWMA, Act 97 Chapters 264a or 265a and 299

**APPENDIX C**

**ACTION-SPECIFIC  
APPLICABLE OR RELEVANT APPROPRIATE REQUIREMENTS**

Location	Requirement	Prerequisite	Citation
Tank Storage - Hazardous Substances  Storage Tanks – Petroleum	Meet generally accepted industry standards: UL142, API 650, etc. Have: secondary containment, alarms, pressure/overflow controls, min. shell thickness established, meet NFPA 30 standard.  Tank Evaluation Repair Plan, VONC plan, standby equipment, VOC emission control device.		PA STSPA, Act 32 Chapter 245  PA SWMA, Act 97 Chapters 264a and 299
Tank treatment (neutralization, filtration, separation, chemical treatment, dewatering)	See tank storage. Also have treatability study program/waste analysis trial treatment test. VOC, fugitive emission controls.		PA SWMA, Act 97 Chapters 264a or 265a
Construction of New Landfill On-Site (see Closure with Waste in Place)	Meet design and performance standard for liners. Meet groundwater isolation distance - no groundwater manipulation allowed. Meet buffer zone, sub base slope and flow zone permeability requirements. Meet leachate and run-off storage requirements. Meet EPA's CQA and MTR. Develop and implement groundwater monitoring program (see closure with waste in place).		PA SWMA, Act 97 Chapters 264a and 288
Construction of New Surface Impoundments	See above, plus meet dike and slope limitation.		PA SWMA, Act 97 Chapters 264a or 265a and 289
Dike Stabilization	Construct dikes with sufficient strength to prevent failure. Meet dike slope limitations for impoundments.		Dam Safety and Encroachments Act; PA SWMA, Act 97 Chapters 264a or 265a and 289
Discharge of Treatment System Effluent	Bureau of Water Supply and Wastewater Mgmt. has authorization of the NPDES discharge and treatment facility construction.		25 Pa. Code Chapters 91, 92, 93, 95, 96
Incineration	Need approval from Bureaus of Air Quality Control and Waste Management. Meet Air Toxics Substances Guidance limits. Prepare Trial Burn Plan, establish POHC's, and demonstrate 99.99% DRE. See also tank storage. Use BAT. Meet buffer zone, odor and noise control.		PA SWMA, Act 97 Chapters 264a or 265a and 297  PA APCA Chapter 127

**APPENDIX C**

**ACTION-SPECIFIC  
APPLICABLE OR RELEVANT APPROPRIATE REQUIREMENTS**

Location	Requirement	Prerequisite	Citation
Thermal treatment (Pyrolysis, Vitrification, etc.)	Obtain Air Quality Plan approval. Meet buffer zone. Develop test plans. See also tank storage. NOTE: No open burning except for detonation of explosives - meet specific buffer zones.		APCA; PA SWMA, Act 97 Chapters 264a or 265a Chapter 127
Land Treatment	Bureau of Water Supply and Wastewater Mgmt. authorization of any treatment facility construction. Meet food-chain crop prohibition, cadmium restriction. Prepare unsaturated zone monitoring plan, VONC plan. Meet setback requirements. Application rates consistent with DEP's "Sewage Septic Tank and Holding Tank Waste Use on Agricultural Land" Guide.		25 Pa. Code Chapter 91; PA SWMA, Act 97 Chapters 264a or 265a and 291
Treatment (when Waste will be Land Disposed)	See Tank Treatment. Prepare Treatability Study Plan. Meet EPA's Land Disposal Restriction Treatment Standard. Prepare Waste Analysis Plan for QA/QC of treatment process. For landfills, meet 20% min. solids content.		PA SWMA, Act 97 Chapters 264a or 265a and 288
Underground Injection of Wastes and Treated Groundwater	Bureau of Water Supply and Wastewater Mgmt. authorization of any treatment facility construction. NOTE: This is prohibited for listed or "derived-from" listed wastes. No Waste Management standards except groundwater monitoring.	Must be a treated waste or groundwater	25 Pa. Code Chapter 91  PA SWMA, Act 97 Chapters 264a or 265a
Waste Piles	Meet liner standards, leachate and run-off storage requirements as for landfills. Meet groundwater isolation distances and setback. Prepare Waste Pile Evaluation and Repair Plan.	Indoor piles have less stringent requirements	PA SWMA, Act 97 Chapters 264a or 265a and 299
Biological Treatment (soils or groundwater)	Meet Air Quality "Haz. Waste and Petroleum Product Contamination Clean-up" procedures. Prepare treatability study plan. See Tank Treatment. Prepare groundwater abatement plan.		PA SWMA, Act 97 Chapters 264a or 265a and 297  PA LRERS, Act 2 Chapter 250



**APPENDIX C**

**ACTION-SPECIFIC  
APPLICABLE OR RELEVANT APPROPRIATE REQUIREMENTS**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>
Stabilization	Prepare treatability study plan. See Tank Treatment.		PA SWMA, Act 97 Chapters 264a or 265a and 297  PA LRERS, Act 2 Chapter 250
Activated carbon treatment of ground/surface water	See above. May need Air Quality approval if VOCs are treated.		PA SWMA, Act 97 Chapters 264a or 265a and 297; APCA
Recovery/Reclamation (solvents, metals, oils)	Air Quality Plan Approval.  Hazardous waste recycling/disposal requirements.	Waste, product, coproduct, byproduct definition	PA SWMA, Act 97 Chapters 261a and 266a
Mining and Reclamation Facility Involvement	Mined land must be restored to approximate original contour (AOC) except areas previously mined prior to current practices and standards may be restored by terracing. Alternatives to AOC and terracing may be approved for certain mining when proposed in conjunction with achieving post mining land use.	Lands affected by "surface mining" as defined in SMCRA and Noncoal SMCRA. Waters affected by mining operations. Mining subsidence damage to surface land.	Surface Mine Conservation and Reclamation Act (SMCRA), Noncoal SMCRA Sec. 7 Coal Refuse Disposal Act, Bituminous Mine Subsidence and Land Conservation Act, Clean Streams Law.
OTHER Non-specific Earthmoving Activity	Meet Chapter 102 requirements, develop Erosion and Sedimentation Control Plan.		Chapter 102.4, 102.31

## APPENDIX D

### CHEMICAL-SPECIFIC MATRIX (ELECTRONIC VERSION ONLY)

1. PA Statewide Health Standards (Act 2) –  
Medium Specific Concentrations for Soil and Groundwater:

For Organics:

<http://files.dep.state.pa.us/LocalGovt/OCRLGS/LocalGovtPortalFiles/SWH%20Tables%202011/Table%203b%202011.pdf>

For Inorganics:

<http://files.dep.state.pa.us/LocalGovt/OCRLGS/LocalGovtPortalFiles/SWH%20Tables%202011/Table%204b%202011.pdf>

2. Pennsylvania Maximum Contaminant Levels for Drinking Water:

For Organics:

<http://files.dep.state.pa.us/LocalGovt/OCRLGS/LocalGovtPortalFiles/SWH%20Tables%202011/Table%201%202011.pdf>

For Inorganics:

<http://files.dep.state.pa.us/LocalGovt/OCRLGS/LocalGovtPortalFiles/SWH%20Tables%202011/Table%202%202011.pdf>

3. Water Quality Criteria for Toxic Substances:

<http://www.pacode.com/secure/data/025/chapter16/chap16toc.html>