

CHAPTER 269a.
PHASE II APPLICATION REQUIREMENTS AND INSTRUCTIONS
FOR DETERMINING SITE SUITABILITY

Phase II Criteria (Cautionary)

Phase II criteria are established in Sections 269a.41-269a.50 and identify further environmental, social and economic factors which may affect the suitability of a location for a proposed facility.

Phase II criteria apply to all hazardous waste *treatment* or *disposal* facilities and modifications thereto. If a facility site does not satisfy a Phase II criteria, the applicant must submit additional information and analyses to allow the Department to assess what effect, if any, failure to satisfy the criterion has upon the acceptability of the site.

After consideration of all relevant information, the Department will determine whether the proposed design, construction and operation of the facility will successfully mitigate adverse effects which would otherwise be associated with failure to satisfy the criterion.

After evaluating each Phase II criterion individually, the Department will evaluate the facility's overall compliance with the Phase II criteria, and will identify risks that have not been eliminated through mitigation measures. If risks to the public health or safety, or to significant natural, scenic, historic or aesthetic values remain, which, in the judgment of the Department, render the proposed facility site unacceptable for a hazardous waste treatment or disposal facility, the Department may include conditions in the permit which eliminate or reduce the identified risks or may deny the permit application.

Chapter 269a. Criterion for Siting Hazardous Waste Treatment and Disposal Facilities

Phase II Criteria are established in 269a.41-269a.50 and listed below

Phase II Criteria

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|---------|-----------------------|
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(a)	New Facilities
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CRITERION: Water Supply(269a.41)

(a) The applicant shall determine whether a proposed surface impoundment, landfill or land treatment facility is within the ground-water recharge area for any public or private water supplies.

The applicant shall delineate the position of the proposed facility site within relevant ground-water flow systems.

The applicant shall identify all public and private water supplies and water treatment plants which may potentially be adversely affected by ground water flow from the hazardous waste facility.

(b) For any water supplies or water treatment plants which may be affected by the proposed facility, the applicant shall submit a detailed hydrogeologic study including information addressing the following:

(1) hydraulic conductivity of the aquifer for the water supplies;

- (2) hydraulic conductivity of the geologic deposits underlying the proposed facility;
- (3) assessment of the influence of faults, fractures, or other structural geologic features upon hydraulic conductivity and groundwater flow directions;
- (4) pumping rates of water supply wells and the areal extent and configuration of the cone of pumping depression associated with these wells in relation to the groundwater table of the surrounding areas.

Needed Information for Mitigation Determination:

For any water supplies or water treatment plants which the hydrogeologic study required in paragraph (b) indicates may be adversely affected by the proposed facility, the applicant shall demonstrate:

- (1) The hydrogeologic characteristics of the proposed facility site and adjacent areas assure that implementation of a groundwater monitoring well program will provide protection of water supplies or water treatment plants from potential contamination; and
- (2) The feasibility of providing a permanent alternative water supply acceptable to the water supply owner of like quantity and quality to the existing supply at no additional cost to said owner.

CRITERION Geology (Section 269a.42)

- (a) Faults. Landfill, land treatment and surface impoundment facilities are deemed to be acceptable if located one mile or more from a major structural feature.

Interpretation:

A major structural feature is a fault mapped by the Pennsylvania Geologic Survey or the United States Geologic Survey at a scale of four miles to the inch.

Needed Information for Mitigation Determination:

If the proposed facility is within one mile of a major structural feature, the applicant shall provide information and analyses to allow the Department to assess the compatibility of the proposed facility design with such faults in the area.

Criterion:

- (b) Bedrock Depth. For surface impoundment, landfill and land treatment facilities, a depth to bedrock of fifteen (15) feet or more shall be considered acceptable.

Interpretation:

The depth to bedrock must be 15 feet or greater. Where the construction of the proposed facility requires excavation, the final depth to bedrock shall be considered.

Needed Information for Mitigation Determination:

The applicant shall address any lesser bedrock depths by providing information and analyses to allow the Department to assess the compatibility of the design and construction of the proposed facility with the bedrock depth.

Criterion:

(c) Slopes. Slopes less than 15% for surface impoundment, landfill and land treatment facilities shall be considered acceptable.

Interpretation:

If slopes are greater than 15%, the applicant must demonstrate that the slopes will be compatible with the design of the facility.

Needed Information for Mitigation Determination:

The applicant shall address any greater slopes by submitting information and analyses to allow the Department to assess the compatibility of the design and construction measures for the proposed facility that would minimize any adverse effects.

Criterion:

(c) Landslide prone areas. If a facility site is to be located in or adjacent to a landslide prone area, the suitability of the site may be in question.

Interpretation:

If a facility site is to be located in or adjacent to a landslide prone area the applicant must demonstrate the compatibility of the facility with the surrounding environment.

Needed Information for Mitigation Determination:

If a facility site is in a landslide prone area or is adjacent to a landslide prone area, the applicant shall submit information and analyses to allow the Department to assess whether the design measures provide adequate protection from potential landslides.

Criterion:

(e) Oil and Gas Wells. Surface impoundment, landfill and land treatment facilities shall be considered acceptable if the applicant can establish that abandoned oil and gas wells and gas storage areas do not exist within the proposed facility site.

Interpretation:

Abandoned oil and gas wells and gas storage areas shall have the same meaning as in the Oil and Gas Act of 1984 (58 P.S. §601.101 et seq.).

Needed Information for Mitigation Determination:

If such abandoned facilities exist, the applicant shall provide information and analyses to allow the Department to assess the probability and degree of any subsurface discharges to be expected from the existence of abandoned oil and gas wells and gas storage areas within the facility site after such wells are plugged.

Criterion:

(f) Carbonate Areas. Where the surface impoundment, landfill, or land treatment and disposal facilities are proposed over areas underlain by carbonate bedrock, the applicant must demonstrate site suitability.

Interpretation:

If a facility is to be located over areas underlain by carbonate bedrock the applicant must demonstrate the integrity of the bedrock.

Needed Information for Mitigation Determination:

The applicant shall provide information and analyses to allow the Department to assess the prevalence of solution channels and the potential for sinkholes at the facility site.

Criterion:

(g) Hydrogeology. A surface impoundment, landfill, or land treatment facility shall not be located in an area underlain by coarse unconsolidated deposits such as well sorted valley fill deposits and heavily fractured bedrock.

Interpretation:

A facility shall not be located in an area where the hydrogeology is conducive to potential contamination.

Needed Information for Mitigation Determination:

If any facility is to be located in an area underlain by coarse unconsolidated deposits the applicant shall provide information and analyses to allow the Department to further assess the facility site to determine the environmental impact of these subsurface conditions.

Criterion:

(h) Seismic Risk Zones. If a proposed treatment or disposal facility is within a five (5) mile radius of earthquake epicenters as mapped by the Pennsylvania Geologic Survey or the United States Geological Survey, the suitability of the site may be in question.

Interpretation:

The suitability of a site, located within a five (5) mile radius of earthquake epicenters may be in question and subject to mitigation.

Needed Information for Mitigation Determination:

The applicant shall specify measures necessary to withstand potential seismic events, and the Department shall determine whether the proposed design measures provide adequate protection from potential earthquake damage.

CRITERION:Soils(Section 269a.43)

(a) pH. Land farming facilities located so the soil pH within the proposed facility is 6.0 or greater shall be deemed to be acceptable.

Needed Information for Mitigation Determination:

If the proposed facility cannot meet the above soil pH requirements, the applicant shall provide information and analyses to allow the Department to assess the ability of the proposed facility to mitigate adverse environmental effects resulting from incompatible soil pH.

Criterion:

(b) Cation Exchange Capacity. Surface impoundment, landfill and land treatment facilities located so that the capacity of the soil to exchange cations expressed as a sum for all exchangeable cations is fifteen (15) milliequivalents per 100 grams of soil or greater shall be deemed to be acceptable.

Needed Information for Mitigation Determination:

If the cation exchange capacity is less than fifteen (15), the applicant shall provide information and analyses to allow the Department to assess the soil cation exchange capacity in relation to the potential for migration of contaminants from the proposed facility.

CRITERION:Mineral Bearing Areas(Section 269a.44)

(a) Ownership of Mineral Rights. The location of a surface impoundment, landfill or land treatment facility shall be deemed to be acceptable if the applicant owns the mineral rights within the proposed facility and the area has not been previously mined.

Needed Information for Mitigation Determination:

If the applicant does not own all the mineral rights within the proposed facility, the applicant shall determine the ownership of mineral rights conveyed with the property deed to the proposed facility. The applicant must further provide a certification based on a property title search, that ownership of all mineral rights including coal, oil and gas is or will be held by the applicant and that these rights will not be severed from the property as long as hazardous waste remains on the property.

Criterion:

(b) Surface Subsidence Risk. If any part of a proposed facility site has been previously mined by deep or surface mining methods the applicant shall provide the results of an engineering study of the proposed site by a competent geotechnical engineer.

Needed Information for Mitigation Determination:

A study shall be submitted which will allow the Department to assess the probability and degree of surface subsidence and the methods which have been used or are proposed to stabilize the surface. Additionally, the applicant shall provide assurance that any minerals providing support will not be mined as long as hazardous waste remains on the site.

CRITERION:Land Use(Section 269a.45)

(a) New Facilities. Treatment and disposal facilities located on lands either designated for industrial use by existing municipal zoning or indicated as industrial in officially adopted county or municipal comprehensive plans or land use maps are deemed to be acceptable.

Interpretation:

New facility - a new hazardous waste management facility. New hazardous waste management facility - a facility for which construction began after November 19, 1980.

Needed Information for Mitigation Determination:

If this standard cannot be met, the applicant shall provide information and analyses to allow the Department to assess the compatibility of the design of the proposed facility with zoning or land use controls. Where no zoning exists, the applicant shall provide information and analyses to allow the Department to assess compatibility with existing land use.

Criterion:

(b) Existing Facilities. Treatment and disposal facilities on sites where solid waste or hazardous waste operations (treatment, storage, recovery and disposal) or both are currently being conducted under authority of the Act are deemed to comply with the Land Use criterion.

Interpretation:

Existing hazardous waste management facility. Any storage facility, any treatment facility, or any permitted disposal facility which was in operation on November 19, 1980, or for which construction was begun on or before November 19, 1980. Construction shall be deemed to have begun if the owner or operator has obtained all permits and preconstruction approvals required by the act and either:

- (i) on-going physical, on-site construction was underway; or
- (ii) the owner or operator has entered into contractual obligations for construction which cannot be cancelled or modified without substantial loss.

CRITERION:Transportation Standards(Section 269a.46)

(a) Access. Treatment and disposal facilities within five (5) miles travel distance of Interstate or limited access highways and served by roads capable of handling anticipated truck traffic or served by a dedicated limited access highway shall be deemed to be acceptable.

Needed Information for Mitigation Determination:

If this standard cannot be met, the applicant shall provide information and analyses to allow the Department to assess:

- the proximity of the proposed facility to Interstate highways.
- the effect upon the operation of the proposed facility.
- the effect of the proposed facility upon the community in the transportation corridor to and from the facility.

If necessary, the applicant shall provide a plan for highway improvements.

Criterion:

(b) Structures Along Transportation Corridor. Treatment and disposal facility sites where the transportation corridor between the entrance to a facility and the nearest Interstate or limited access highway is the primary access for less than five (5) residential dwellings per road mile with no schools, community parks or hospitals, are deemed to be acceptable.

Needed Information for Mitigation Determination:

If these criteria are not met, the applicant shall provide information and analyses to allow the Department to assess the effect the proposed facility will have upon safety and traffic congestion.

Criterion:

(c) Transportation Restrictions. Treatment and disposal facility sites are deemed to be acceptable if there are less than four (4) intersections per mile between the entrance to the facility and the nearest Interstate or limited access highway.

Needed Information for Mitigation Determination:

If there are four (4) or more intersections per mile, the applicant shall provide information and analyses to allow the Department to assess the effect the proposed facility will have upon safety and traffic congestion.

CRITERION:Safety Services(Section 269a.47)

Treatment and disposal facilities are deemed to be acceptable if located within an area with adequate safety services. In all cases, the applicant must also comply with the requirements of (Chapter 264, Subchapter C) (relating to preparedness and prevention) and Chapter 264, Subchapter D (relating to contingency plans).

Needed Information for Mitigation Determination:

The applicant shall provide information and analyses to allow the Department to assess the adequacy of fire protection, police, ambulance and other necessary safety services available and willing to provide services to the proposed facility.

CRITERION:Proximity of Facilities and Structures(Section 269a.48)

Treatment and disposal facility sites are deemed to be acceptable if the distance from the facility to any airport, school, community park, hospital, church, retail center or nursing home, is greater than one mile.

Needed Information for Mitigation Determination:

If this criterion cannot be met, the applicant shall provide information and analyses to allow the Department to assess the effect the proposed facility will have on the use of these facilities.

CRITERION:Economic Criteria(Section 269a.49)

A treatment or disposal facility which does not adversely effect the economy of the host and contiguous municipalities and municipalities contiguous to the transportation corridor to the nearest Interstate or limited access highway is deemed to be acceptable without further assessment.

Needed Information for Mitigation Determination:

If the facility will result in a net loss of revenues to local jurisdictions, the applicant shall provide information and analyses to allow the Department to assess any compensation needed to offset actual net loss of revenues to local jurisdictions caused by the proposed facility.

CRITERION:Environmental Assessment Considerations(Section 269a.50)

These criteria are used to assist the Department in evaluating the potential impact of a proposed treatment or disposal facility on natural, scenic, historic and aesthetic values of the environment, in accordance with Article 1, Section 27 of the Pennsylvania Constitution. The Department will determine whether significant environmental harm will occur after reviewing the applicant's environmental assessment report submitted in compliance with *25 Pennsylvania Code*, Chapters 260a.-270a. and these regulations and after consulting with the applicant and relevant governmental agencies.

If the Department determines that there is a significant impact on natural, scenic, historic, or aesthetic values of the environment, the Department will consult with the applicant to examine ways to reduce the environmental incursion to a minimum. If, after consideration of mitigation measures, the Department finds that significant environmental harm will occur, the Department will evaluate the social and economic benefits of the proposed facility to determine whether the harm outweighs the benefits. The evaluation of environmental harm must include at a minimum, a consideration of the impact of the proposed facility on the fifteen types of environmental resources described in Module 9. There may be additional potentially affected natural, scenic, historic or aesthetic values which the Department is constitutionally obligated to protect that will be considered for proposed facilities in some locations. In those instances, the Department will identify those additional potential impacts for the applicant.

Needed Information for Mitigation Determination:

Module 9