

**REQUIREMENTS FOR SITE REMEDIATION**

**CHAPTER 26E**

**TECHNICAL REQUIREMENTS  
FOR SITE REMEDIATION**

**Authority**

N.J.S.A. 13:1D-1 et seq., 13:1E-1 et seq., 13:1K-6 et seq.,  
58:10-23.11a et seq., 58:10A-1 et seq., 58:10A-21 et  
seq., and 58:10B-1 et seq.

**Source and Effective Date**

R.2003 d.29, effective December 17, 2002.  
See: 34 N.J.R. 170(a), 35 N.J.R. 710(a).

**Chapter Expiration Date**

Chapter 26E, Technical Requirements for Site Remediation, expires  
on December 17, 2007.

**Chapter Historical Note**

Chapter 26E, Technical Requirements for Site Remediation, was  
adopted as R.1993 d.245, effective June 7, 1993 (operative July 1, 1993).  
See: 24 N.J.R. 1695(a), 25 N.J.R. 2281(b).

Pursuant to Executive Order No. 66(1978), Chapter 26E, Technical  
Requirements for Site Remediation, was readopted as R.1997 d.124,  
effective February 18, 1997. As a part of R.1997 d.124, effective May,  
19, 1997 (operative July 18, 1997), Subchapter 5, Remedial Alternative  
Analysis, was repealed and a new Subchapter 5, Remedial Action  
Selection, was adopted. See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29  
N.J.R. 2278(b).

Chapter 26E, Technical Requirements for Site Remediation, was  
readopted as R.2003 d.29, effective December 17, 2002, and Subchapter  
8, Engineering and Institutional Controls, was adopted as R.2003 d.29,  
effective February 3, 2003. See: Source and Effective Date. See, also,  
section annotations.

**Law Review and Journal Commentaries**

Corrective Action. Norman W. Spindel and Andrea Wolff, 151  
N.J.L.J. 752 (1998).

Historic Pesticide Contamination Task Force Issues Report. Bruce  
S. Katcher, 155 N.J.L.J. 1155 (1999).

ISRA: What You Need to Know. Richard J. Conway, Jr., 160  
N.J.Law. 16 (Mag.) (April 1994).

Liability Limitations: Even With New Protections, Purchasers Must  
Be Diligent. Todd L. Normane, 151 N.J.L.J. 748 (1998).

Natural Resource Damages: New Jersey's New Approach. Dennis  
Krumhotz and Marilyn R. Greenberg, 155 N.J.L.J. 705 (1999).

Who is "In Any Way Responsible" Under the Spill Act? Matthew S.  
Slowinski, 150 N.J.L.J. 301 (1997).

**CHAPTER TABLE OF CONTENTS**

**SUBCHAPTER 1. GENERAL INFORMATION**

- 7:26E-1.1 Scope
- 7:26E-1.2 Liberal construction
- 7:26E-1.3 Applicability
- 7:26E-1.4 Notification
- 7:26E-1.5 Certifications
- 7:26E-1.6 Documenting compliance with the technical requirements

- 7:26E-1.7 Criteria for going beyond the minimum technical require-  
ments
- 7:26E-1.8 Definitions
- 7:26E-1.9 Health and safety plan
- 7:26E-1.10 Severability
- 7:26E-1.11 Bias for action
- 7:26E-1.12 Requirement for Department oversight of remediation
- 7:26E-1.13 Minimum groundwater and surface water remediation  
standards

**SUBCHAPTER 2. QUALITY ASSURANCE FOR  
SAMPLING AND LABORATORY ANALYSIS**

- 7:26E-2.1 Quality assurance requirements
- 7:26E-2.2 Quality assurance project plan

**SUBCHAPTER 3. PRELIMINARY ASSESSMENT AND  
SITE INVESTIGATION**

- 7:26E-3.1 Preliminary assessments
- 7:26E-3.2 Preliminary assessment report
- 7:26E-3.3 Site investigations
- 7:26E-3.4 Site investigation—general sampling requirements
- 7:26E-3.5 Site investigation—building interiors
- 7:26E-3.6 Site investigation—soil
- 7:26E-3.7 Site investigation—ground water
- 7:26E-3.8 Site investigation—surface water and sediment
- 7:26E-3.9 Site investigation—area specific requirements
- 7:26E-3.10 Site investigation—background investigation in soil
- 7:26E-3.11 Site investigation—ecological evaluation
- 7:26E-3.12 Site investigation—historic fill material
- 7:26E-3.13 Site investigation report

**SUBCHAPTER 4. REMEDIAL INVESTIGATIONS**

- 7:26E-4.1 Remedial investigation requirements
- 7:26E-4.2 Remedial investigation workplan
- 7:26E-4.3 Remedial investigation of soil
- 7:26E-4.4 Remedial investigation of ground water
- 7:26E-4.5 Remedial investigation of surface water, wetlands and sedi-  
ment
- 7:26E-4.6 Remedial investigation of landfills and historic fill material
- 7:26E-4.7 Remedial investigation of ecological receptors
- 7:26E-4.8 Remedial investigation report

**SUBCHAPTER 5. REMEDIAL ACTION SELECTION**

- 7:26E-5.1 Remedial action selection
- 7:26E-5.2 Remedial action selection report

**APPENDIX**

**SUBCHAPTER 6. REMEDIAL ACTION**

- 7:26E-6.1 Remedial action requirements
- 7:26E-6.2 Remedial action workplan
- 7:26E-6.3 Specific remedial action requirements
- 7:26E-6.4 Post remedial action requirements
- 7:26E-6.5 Remedial action schedule
- 7:26E-6.6 Remedial action progress reports
- 7:26E-6.7 Remedial action report

**SUBCHAPTER 7. PERMIT IDENTIFICATION AND  
APPLICATION SCHEDULE**

- 7:26E-7.1 Permit identification

**SUBCHAPTER 8. ENGINEERING AND  
INSTITUTIONAL CONTROLS**

- 7:26E-8.1 General requirements
- 7:26E-8.2 Deed notice requirements
- 7:26E-8.3 Groundwater classification exception areas

- 7:26E-8.4 Monitoring, maintenance, and biennial certification—who has obligation and when
- 7:26E-8.5 Monitoring, maintenance, and biennial certification—requirements for deed notices and declarations of environmental restrictions
- 7:26E-8.6 Monitoring, maintenance, and biennial certification—specific requirements for groundwater classification exception areas
- 7:26E-8.7 Monitoring, maintenance, and biennial certification—engineering and institutional controls

- APPENDIX A Laboratory Data Deliverables Formats
- APPENDIX B Well Search Format
- APPENDIX C Mann-Whitney U-Test
- APPENDIX D Historic Fill Database
- APPENDIX E Model Deed Notice
- APPENDIX F Groundwater Classification Exception Area Fact Sheet
- APPENDIX G Contour Map Reporting Form

SUBCHAPTER 1. GENERAL INFORMATION

7:26E-1.1 Scope

(a) This chapter constitutes the minimum technical requirements to investigate and remediate contamination at any site.

(b) Any remediation performed pursuant to this chapter shall not relieve any person from:

- 1. Complying with more stringent requirements or provisions imposed by any other Federal, State or local applicable statutes or regulations; or
- 2. Obtaining any and all permits required by State, Federal or local statute or regulation, except as expressly provided herein.

(c) No provision of this chapter shall be construed to limit the Department's authority to require additional remediation based upon site-specific conditions in order to protect human health and the environment.

7:26E-1.2 Liberal construction

These rules, being necessary to promote the public health and welfare, shall be liberally construed in order to permit the Commissioner and the Department to effectuate the purposes of N.J.S.A. 13:1D-1 et seq., 13:1E-1 et seq., 13:1K-6 et seq., 58:10-23.11a et seq., 58:10A-1 et seq., and 58:10A-21 et seq.

7:26E-1.3 Applicability

(a) This chapter establishes the minimum technical requirements that form the basis of the Department's review of the remediation of any contaminated site in New Jersey, including, without limitation, those sites and activities subject to:

- 1. The Industrial Site Recovery Act (ISRA);
- 2. The New Jersey Underground Storage of Hazardous Substances Act (UST);
- 3. The Spill Compensation and Control Act;
- 4. The Solid Waste Management Act;
- 5. The Water Pollution Control Act;
- 6. The Resource Conservation and Recovery Act (RCRA);
- 7. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. §§ 9601 et seq.) (CERCLA); and
- 8. The Brownfield and Contaminated Site Remediation Act.

(b) Any person seeking Department review of work undertaken pursuant to this chapter shall:

- 1. Execute an oversight document with the Department pursuant to N.J.A.C. 7:26C;
- 2. Comply with the requirements of N.J.A.C. 7:26B; or
- 3. Comply with the requirements of N.J.A.C. 7:14B.

(c) The requirements of this chapter are applicable as follows:

- 1. For any site at which a particular phase of remediation was commenced prior to July 1, 1993, the Department shall evaluate such work to determine whether the work is in substantial compliance with this chapter, as originally adopted effective June 7, 1993 (see 25 N.J.R. 2881(b)), and therefore acceptable to the Department.
- 2. Any work conducted after February 3, 2003 shall be in full compliance with this chapter, except that work conducted pursuant to workplans which were submitted to the Department prior to February 3, 2003 may be conducted pursuant to N.J.A.C. 7:26E in effect as of August 2, 1999, as long as work is conducted within six months of Department approval of the workplan.

(d) All applicable remediation standards and remedial actions that involve real property located in the Pinelands area shall be consistent with the provisions of the Pinelands Protection Act, N.J.S.A. 13:18A-1 et seq. and any rules promulgated pursuant thereto, and with section 502 of the National Parks and Recreation Act of 1978, 16 U.S.C. § 4711.

Amended by R.1997 d.124, effective May 19, 1997 (operative July 18, 1997).  
 Sec: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).

iii. Provides results which are verifiable and reproducible;

iv. Can be expected to achieve the same results or objectives as the method which it proposes to replace;

v. Furthers the attainment of the goals of the specific remedial phase for which it is used; and

vi. Is consistent with the overall scheme of this chapter to ensure the remediation of contaminated sites in a manner which is protective of human health and the environment.

(d) Any person responsible for conducting the remediation may petition the Department for a variance from any of

the requirements in N.J.A.C. 7:26E-2 through 6 inclusive pursuant to the procedural criteria in (d)1 and the substantive criteria in (d)2, below. The petition shall include a request for use of an alternative approach to be utilized in place of the requirement for which the variance has been requested. The variance is not effective until it has been approved by the Department. The decision as to whether or not to grant the variance rests solely with the Department. A variance petition may be submitted within an oversight document executed in accordance with N.J.A.C. 7:26C, or pursuant to the program requirements of N.J.A.C. 7:26B or N.J.A.C. 7:14B. The Department shall make reasonable efforts to provide timely responses to variance petitions.

1. To petition for a variance from a requirement in N.J.A.C. 7:26E-2 through 6, the petitioner shall submit the following information to the Department at the address in the applicable oversight document or in accordance with the program requirements of N.J.A.C. 7:26B or N.J.A.C. 7:14B prior to the utilization of the alternate approach:

- i. The name and address of the person submitting the petition;
- ii. The name and address of the person conducting the remediation;
- iii. The names and addresses of the owner(s) and occupant(s) of the site which is the subject of the variance;
- iv. The street address and all tax block and lot numbers of the site which is the subject of the variance;
- v. A description of the proposed alternate approach and applicable N.J.A.C. 7:26E citation;
- vi. A description of site specific conditions applicable to the variance;
- vii. The technical basis for the variance pursuant to (c) above; and
- viii. Any other information or data the Department requests to thoroughly evaluate the petition.

2. The Department will evaluate the petition for a variance from the requirements of N.J.A.C. 7:26E-2 through 6 according to the same criteria as those listed in (c) above for approval of alternate methods.

3. Verbal variances may be granted pursuant to N.J.A.C. 7:26E-3.4(a)4.

(e) The person responsible for conducting the remediation shall have a continuing obligation to ensure that the Department receives all complete, accurate and relevant information regarding remediation at the site.

Amended by R.1997 d.124, effective May 19, 1997 (operative July 18, 1997).

See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).

In (b), deleted N.J.A.C. reference and substituted "ISRA" for "ECRA"; in (d), substituted "A variance petition may be submitted within" for "The Department will review a petition for a variance pursuant to" and added the last sentence; in (d)1, inserted N.J.A.C. reference; and added (d)3 and (e).

Amended by R.1999 d.241, effective August 2, 1999.

See: 30 N.J.R. 2373(a), 31 N.J.R. 2167(a).

In (b), inserted "in a timely manner" following "reports" in the first sentence.

Amended by R.2003 d.29, effective February 3, 2003.

See: 34 N.J.R. 170(a), 35 N.J.R. 710(a).

In (a) and (b), amended the N.J.A.C. references.

**7:26E-1.7 Criteria for going beyond the minimum technical requirements**

(a) The Department may require additional work beyond the minimum technical requirements set forth in this chap-

ter for whenever necessary for the Department to ensure adequate protection of human health and the environment based upon a review of the following areas:

- 1. The number or magnitude of the discharge(s) being investigated;
- 2. The nature of the substances discharged;
- 3. A change in the certification or other authorization of the laboratory performing analyses previously submitted for the site in question or any other site;
- 4. The identification of additional exposure pathways not otherwise fully investigated pursuant to the minimum requirements;
- 5. The identification of additional receptors not otherwise fully investigated pursuant to the minimum requirements;
- 6. Distance to and sensitivity of receptors;
- 7. When the Department determines that additional data or information is needed to fully evaluate the site; and
- 8. Any other site-specific conditions the Department identifies which necessitate the need for additional work.

**7:26E-1.8 Definitions**

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

"Acid extractable organic compounds" means semivolatile compounds amenable to analysis by extraction of the sample with a pH acidic organic solvent. For the purposes of this chapter, analysis of acid extractable organic compounds means the analysis of a sample for either:

- 1. Those priority pollutants listed as acid compounds in Appendix B, Table II of N.J.A.C. 7:14A; or
- 2. Those target compound list compounds which are phenol and phenolic compounds under the listing of semivolatile compounds in the version of the EPA Contract Laboratory Program Statement of Work for Organic Analysis, Multi-Media, Multi-Concentration in effect as of the date on which the laboratory is performing the analysis.

"Active ground water remediation" means any form of ground water remediation which requires physical action to alter the nature of the impacted aquifer for the purposes of achieving applicable remediation standards. Active ground water remediation includes, but is not limited to, pumping that consistently depresses the water table over an areal extent, air sparging, and bioremediation involving the addition of nutrients and/or organisms below the water table.

"Aquifer" means "aquifer" as defined in the Ground Water Quality Standards, N.J.A.C. 7:9-6.4.

“Area of concern” means any existing or former location where hazardous substances, hazardous wastes, or pollutants are or were known or suspected to have been discharged, generated, manufactured, refined, transported, stored, handled, treated, disposed, or where hazardous substances, hazardous wastes, or pollutants have or may have migrated, including, but not limited to, all current and former:

1. Bulk storage tanks and appurtenances, including, without limitation:
  - i. Tanks and silos;
  - ii. Rail cars;
  - iii. Piping, above and below ground pumping stations, sumps and pits; and
  - iv. Loading and unloading areas;
2. Storage and staging areas, including:
  - i. Storage pads and areas;
  - ii. Surface impoundments and lagoons;
  - iii. Dumpsters; and
  - iv. Chemical storage cabinets or closets;
3. Drainage systems and areas, including, without limitation:
  - i. Building floor drains and piping, sumps and pits, including trenches and piping from sinks that potentially receive process waste;
  - ii. Roof leaders (when process operations vent to roof);
  - iii. Drainage swales and culverts;
  - iv. Storm sewer collection systems;
  - v. Storm water detention ponds and fire ponds;
  - vi. Surface water bodies;
  - vii. Leach fields; and
  - viii. Dry wells and sumps;
4. Discharge and disposal areas, including, without limitation:
  - i. Areas of discharges pursuant to N.J.A.C. 7:1E;
  - ii. Waste piles as defined by N.J.A.C. 7:26;
  - iii. Waste water treatment, collection and disposal systems, including, without limitation, septic systems, seepage pits and dry wells;
  - iv. Landfills;
  - v. Landfarms;
  - vi. Sprayfields;
  - vii. Incinerators; and

viii. Historic fill material areas or any other fill material areas;

5. Other areas of concern, including, without limitation:

- i. Electrical transformers and capacitors;
- ii. Hazardous materials storage or handling areas;
- iii. Waste treatment areas;
- iv. Discolored areas or spill areas;
- v. Open areas away from production operations;
- vi. Areas with stressed vegetation;
- vii. Other discharge areas;
- viii. Underground piping including industrial process sewers;
- ix. Compressor vent discharges;
- x. Non contact cooling water discharges;
- xi. Areas that may have received floodwater or stormwater runoff from potentially contaminated areas; and
- xii. Any other area suspected of containing contaminants;

6. Ground water areas of concern, including, without limitation, present or past regulated activities under the New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge to Ground Water regulations, N.J.A.C. 7:14A, including: seepage pits; dry wells; lagoons; and septic systems which received industrial waste; and

7. Surface water areas of concern, including, without limitation, all surface water areas and associated sediment which receive or may have received any point or non-point source discharge from the site.

“Background ground water contamination” means concentrations of hazardous substances, hazardous waste and pollutants in ground water that originated from either natural sources (that is, non-man-made) or upgradient, offsite discharges (that is, man-made, non-site-related discharges). Background ground water contamination may include, but is not limited to, the same contaminants present both on the site and off the site at upgradient locations, or parent contaminants detected off the site at upgradient locations and daughter products of these parent contaminants detected on the site.

“Base neutral organic compound” means semivolatile compounds amenable to analysis by extraction of the sample with a pH neutral and a pH basic organic solvent. For the purposes of this chapter, analysis of base neutral organic compounds means the analysis of a sample for either:

1. Those priority pollutants listed as base neutral compounds in Appendix B, Table II of N.J.A.C. 7:14A; or

2. Those target compound list compounds identified as semivolatiles except phenol and phenolic compounds in the version of the EPA Contract Laboratory Program Statement of Work for Organic Analysis, Multi-Media, Multi-Concentration in effect as of the date on which the laboratory is performing the analysis.

“CERCLA” means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 9601 et seq.).

“Commissioner” means the Commissioner of the Department of Environmental Protection or his or her authorized representative.

“Containment” or “containment activities” means actions to limit or prevent discharges or the spread of contamination.

“Contaminated site” means all portions of environmental media at a site and any location where contamination is emanating, or which has emanated, therefrom, that contain one or more contaminants at a concentration which fails to satisfy any applicable remediation standard.

“Contamination” or “contaminant” means any discharged hazardous substance as defined pursuant to N.J.S.A. 58:10-23.11b, hazardous waste as defined pursuant to N.J.S.A. 13:1E-38, or pollutant as defined pursuant to N.J.S.A. 58:10A-3.

“Contract laboratory program” or “CLP” means a program of chemical analytical services developed by the EPA to support CERCLA.

“Damages” means the amount of money the Department has determined is necessary to restore, rehabilitate, replace or otherwise compensate for the injury to natural resources as a result of a discharge.

“Deed notice” means a document which is identical in wording to N.J.A.C. 7:26E, Appendix E and which provides notice of the following for a specific real property:

1. That the contamination on the real property exists at a level above the applicable unrestricted use soil remediation standards;
2. The restrictions to the applicable property due to contamination; and
3. The engineering controls applicable to the property.

“Department” means the New Jersey Department of Environmental Protection.

“Department certified laboratory” means a laboratory that is currently certified pursuant to N.J.A.C. 7:18, the Regulations Governing Laboratory Certification and Stan-

dards of Performance, to perform laboratory analyses for a specific certification category and a specific parameter within the certification categories.

“Diligent inquiry” means:

1. Conducting a diligent search of all documents which are reasonably likely to contain information related to the object of the inquiry, which documents are in such person’s possession, custody or control, or in the possession, custody or control of any other person from whom the person conducting the search has a legal right to obtain such documents; and

2. Making reasonable inquiries of current and former employees and agents whose duties include or included any responsibility for hazardous substances, hazardous wastes, or pollutants, and any other current and former employees or agents who may have knowledge or documents relevant to the inquiry.

“Discharge” means any intentional or unintentional action or omission resulting in the releasing, spilling, leaking, pumping, pouring, emitting, emptying or dumping of a hazardous substance, hazardous waste or pollutant into the waters or onto the lands of the State, or into waters outside the jurisdiction of the State when damage may result to the lands, waters, or natural resources within the jurisdiction of the State.

“Effective solubility” means the theoretical aqueous solubility of an organic constituent in ground water that is in chemical equilibrium with a separate phase mixed product (product containing several organic chemicals). The effective solubility of a particular organic chemical can be estimated by multiplying its mole fraction in the product mixture by its pure phase solubility.

“Engineering controls” means any physical mechanism to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, without limitation, caps, covers, dikes, trenches, leachate collection systems, signs, fences, physical access controls, groundwater monitoring systems and groundwater containment systems including, without limitation, slurry walls and groundwater pumping systems.

“Environmental medium” means any component such as soil, air, sediment, structures, ground water or surface water.

“Environmentally sensitive natural resources” means all areas defined at N.J.A.C. 7:1E-1.8(a), ground water, and areas and/or resources that are protected or managed pursuant to the Pinelands Protection Act, N.J.S.A. 13:18A-1 et seq. and the Pinelands Comprehensive Management Plan, N.J.A.C. 7:50.

“EPA” means the United States Environmental Protection Agency.

“Fill material” means non-indigenous material, used to replace soil in an area or raise the topographic elevation of the site.

“Free product” means a separate phase material, present in concentrations greater than a contaminant’s residual saturation point. This definition applies to solids, liquids, and semi-solids. The presence of free product shall be determined pursuant to the methodologies described in N.J.A.C. 7:26E-2.1(a)11.

“Full laboratory data deliverables” means those deliverables identified as follows:

1. For non-EPA/Contract Laboratory Program analyses, the regulatory format data deliverables listed in the version of the Professional Laboratory Analytical Services contract issued by the New Jersey Department of Treasury, Division of Purchase and Property in effect as of the date on which the laboratory is performing the analysis; and

2. For EPA/Contract Laboratory Program analyses, the deliverables listed in the EPA Contract Laboratory Program “Statement of Work” documents in effect as of the date on which the laboratory is performing the analysis as modified by specific requirements listed in Appendix A, incorporated herein by reference.

“Groundwater use area” means any area, as determined by a well search conducted pursuant to N.J.A.C. 7:26E-3.7(e)3 and an evaluation of the current and potential groundwater uses of an area using a 25-year planning horizon pursuant to N.J.A.C. 7:26E-8.3(b)4ii, where any domestic, irrigation, industrial, public supply well, or well with a water allocation permit exists, is proposed, or where there is reasonable expectation a well will be installed within the 25-year planning horizon.

“Ground water” means the portion of the water beneath the land surface that is within the zone of saturation where all pore spaces of the geologic formation are filled with water.

“Hazardous waste” means any solid waste as defined in the Solid Waste Regulations, N.J.A.C. 7:26-1.4, that is further defined as a hazardous waste pursuant to the Hazardous Waste Regulations, N.J.A.C. 7:26-8.

“Highly permeable soils” means soils having less than 15 percent silts and/or clays. Soils may be classified in the field using a standard system texture analysis.

“Historic fill material” means non-indigenous material, deposited to raise the topographic elevation of the site, which was contaminated prior to emplacement, and is in no way connected with the operations at the location of emplacement and which includes, without limitation, construction debris, dredge spoils, incinerator residue, demolition debris, fly ash, or non-hazardous solid waste. Historic fill material does not include any material which is substantially chromate chemical production waste or any other chemical production waste or waste from processing of metal or mineral ores, **residues**, **slag** or **tailings**. In addition, historic fill material does not include a municipal solid waste landfill site.

“Immediate environmental concern” means a condition which poses an acute threat to human health or a direct threat to the drinking water of the State including, but not limited to:

1. Dermal contact, inhalation or ingestion of contaminated materials;
2. Potable water supplies contaminated above the applicable drinking water standard; and
3. Contaminants which are confirmed to exist in an occupied or confined space, producing a toxic or harmful gas resulting in a potential for an acute short-term human health exposure, or producing an oxygen deficient atmosphere, or resulting in demonstrated physical damage to essential underground services.

“Impermeable” means a layer of natural and/or man-made material of sufficient thickness, density and composition so as to have a maximum permeability for water of  $10^{-7}$  cm/sec at the maximum anticipated hydrostatic pressure.

“Injury” means any adverse change or impact of a discharge on a natural resource or impairment of a natural resource service, whether direct or indirect, long term or short term, and includes the partial or complete destruction or loss of the natural resource.

“Innovative remedial action technology” means a new or alternative method, procedure or process that does not have a substantial operational record. An innovative remedial action technology with a substantial operational record in one field could be considered innovative if it is proposed for a new or different environmental problem.

“Institutional controls” means a mechanism used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for the unrestricted use of the property. Institutional controls may include, without limitation, structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

“Landfill” means a sanitary landfill as defined pursuant to N.J.S.A. 13:1E-1 et seq.

“Limited restricted use remedial action” means any remedial action for soil that requires the continued use of institutional controls but does not require the use of an engineering control in order to meet the established health risk or environmental standards.

“Method detection limit” or “MDL” means the minimum concentration of a substance that can be measured and reported with a 99 percent confidence that the analyte concentration is greater than zero and is determined from the analysis of a sample in a given matrix containing the analyte.

“Mineral oil” means an oil of mineral origin, refined from crude oil, possessing electrical insulating properties.

“Natural background soil level” means the chemical concentration of a substance which is found in soil and which is not attributable to human activity.

“Natural ground water remediation” means any form of ground water remediation in which only degradation, retardation, and dispersion mechanisms are used to achieve applicable remediation standards. For active ground water remediations, this definition shall also apply to portions of plumes that are not captured by the active ground water remediation, but are expected to be naturally remediated after separation from the source plume.

“Natural resources” means all land, biota, fish, shellfish, and other wildlife, air, waters and other such resources.

“No further action letter” means a written determination by the Department that based upon an evaluation of the historical use of the site, or of an area of concern or areas of concern at that site, as applicable, and any other investigation or action the Department deems necessary, there are no discharged contaminants present at the site, at the area of concern or areas of concern, or at any other site to which a discharge originating at the site has migrated, or that any discharged contaminants present at the site or that have migrated from the site have been remediated in accordance with applicable remediation regulations.

“Non-targeted compound” means a compound detected in a sample using a specific analytical method that is not a targeted compound, a surrogate compound, a system monitoring compound or an internal standard compound.

“Order of magnitude” means a factor of 10.

“Oversight document” means any document defined as an oversight document pursuant to N.J.A.C. 7:26C.

“Person” means any individual or entity, including without limitation, a public or private corporation, company, estate, association, society, firm, partnership, joint stock company, foreign individual, or entity, interstate agency or authority, the United States, and any of its political subdivisions, the State of New Jersey, or any of the political subdivisions of or found within the State of New Jersey, or any of the other meanings which apply to the common understanding of the term.

“Person responsible for conducting the remediation” includes any person who executes or is otherwise subject to an oversight document, and any person who is performing the remediation or has control over the person (for example, contractor or consultant) who is performing the remediation, including, without limitation, an owner or operator who is subject to either ISRA or UST.

“Pollutant” means any substance defined as such pursuant to the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.

“Practical quantitation level” or “PQL” means the lowest quantitation level of a given analyte that can be reliably achieved among laboratories within the specified limits of precision and accuracy of a given analytical method during routine laboratory operating conditions.

“Preliminary assessment” means the first phase in the process of identifying areas of concern pursuant to N.J.A.C. 7:26E-3.

“Priority pollutant plus 40” or “PP + 40” means the priority pollutant list of 126 compounds and elements developed by the EPA pursuant to Section 307(a)(1) of the Clean Water Act and 40 non-targeted organic compounds detected by gas chromatography/mass spectroscopy (GC/MS) analysis. For the purposes of this chapter, a PP + 40 scan means the analysis of a sample for all priority pollutants except asbestos and 2,3,7,8-tetra-chloro-dibenzo-p-dioxin, and up to 15 non-targeted volatile organic compounds and up to 25 non-targeted semivolatile organic compounds as analyzed using GC/MS analytical methods. Non-targeted compound criteria shall be used pursuant to the version of the EPA “Contract Laboratory Program Statement of Work for Organic Analysis, Multi-media, Multi-concentration” in effect as of the date which the laboratory is performing the analysis.

“Prospective purchaser” means any person contemplating acquiring contaminated property who:

1. Is not in any way responsible under any statute, Federal or state, or common law for any hazardous substances, hazardous wastes, or other pollutants discharged at a contaminated site; and
2. Is not a corporate successor to, or capitalized by, any person who is in any way responsible under any statute, Federal or state, or common law for any hazardous substances, hazardous wastes, or other pollutants discharged at a contaminated site.

“Quality assurance” means the total integrated program for assuring the reliability of monitoring and measurement data which includes a system for integrating the quality planning, quality assessment and quality improvement efforts to meet data end-use requirements.

“Quality assurance project plan” means a document which presents in specific terms the policies, organization, objectives, functional activities and specific quality assurance/quality control activities designed to achieve the data quality goals or objectives of a specific project or operation.

“Quality control” means the routine application of procedures for attaining prescribed standards of performance in the monitoring and measurement process.

“Receptor” means any human or other ecological component which is or may be affected by a contaminant from a contaminated site.

“Reduced laboratory data deliverables” means, for both EPA/Contract Laboratory Program and non-EPA/Contract Laboratory Program analyses, the laboratory data deliverables listed in Appendix A, Sections III and IV.

“Region of the site” means the area on and adjacent to the site.

“Remedial action” means those actions taken at a contaminated site as may be required by the Department, including, without limitation, removal, treatment measures, containment, transportation, securing, or other engineering or institutional controls, whether to an unrestricted use or otherwise, designed to ensure that any discharged contaminant is remediated in compliance with the applicable remediation standards pursuant to N.J.A.C. 7:26E-6.

“Remedial action costs” means all costs associated with the development and implementation of a remedial action including all direct and indirect capital costs, engineering costs, and annual operation, maintenance and monitoring costs. Such costs, when applicable, shall include, without limitation, costs for construction of all facilities and process equipment, labor, materials, construction equipment and services, natural resource damages, land purchase, land preparation/development, relocation expenses, systems start up and testing, facility operation, maintenance and repair, continuous effectiveness monitoring, periodic site condition reviews, and legal, administrative and capital costs associated with the placement of institutional controls on a property. Remedial action costs shall be expressed as net present worth of all such costs over time by discounting all future costs to the current calendar year. The discount rate to be used for all present worth analyses shall be the current rate as specified by the EPA at the time of remedial action selection and shall be applied before taxes and after inflation. The period of performance for present worth costing analyses shall not exceed 30 years.

“Remedial action selection” means the process of selecting the most appropriate remedy for a site or area of concern that will ensure protection of the public health, and safety and the environment, based upon careful consideration of a variety of factors, including, without limitation, future site use, surrounding land uses, remediation goals and objectives, cost, implementability, reliability and effectiveness.

“Remedial action selection report” means a report describing how a proposed non-CERCLA/non-RCRA remedial action was determined to be the most appropriate remedy pursuant to N.J.A.C. 7:26E-5.

“Remedial investigation” means actions to investigate contamination and the problems presented by a discharge. The requirements of a remedial investigation are set forth at N.J.A.C. 7:26E-4.

“Remedial phase” means a distinct component of the remediation process. Such components may include preliminary assessment, site investigation, remedial investigation, remedial alternative analysis, and remedial action.

“Remediation” or “remediate” means all necessary actions to investigate and cleanup or respond to any known, suspected, or threatened discharge, including, as necessary, the preliminary assessment, site investigation, remedial investigation and remedial action; provided, however, that “remediation” or “remediate” shall not include the payment of compensation for damage to, or loss of, natural resources.

“Remediation standards” means the combination of numeric standards that establish a level or concentration, and narrative standards, to which contaminants must be treated, removed or otherwise cleaned for soil, ground water or surface water, as provided by the Department pursuant to N.J.S.A. 58:10B-12, in order to meet the health risk or environmental standards.

“Residual product” means a separate phase material present in concentrations below a contaminant’s residual saturation point, retained in soil or geologic matrix pore spaces or fractures by capillary forces. This definition applies to solids, liquids, and semi-solids. The presence of residual product shall be determined pursuant to the methodologies described in N.J.A.C. 7:26E-2.1(a)11.

“Residual saturation point” means the saturation point below which non-aqueous phase liquid becomes discontinuous and is immobilized by capillary forces, and fluid drainage will not occur.

“Restricted use remedial action” means any remedial action for soil that requires the continued use of engineering and institutional controls in order to meet the established health risk or environmental standards.

“Restricted use standard” means a numeric soil remediation standard which, when achieved, restores the contaminated soil to a condition suitable for only certain specified uses.

“Retardation” means any process that acts to inhibit the movement of a solute in ground water, such that the solute travels more slowly than the ground water itself.

“Semivolatile organic compounds” means compounds amenable to analysis by extraction of the sample with an organic solvent. For the purposes of this chapter, analysis of semivolatile organic compounds means the analysis of a sample for either:

1. Those priority pollutants listed as base neutral and acid compounds in Appendix B, Table II of N.J.A.C. 7:14A; or

2. Those target compound list compounds identified as semivolatiles in the version of the EPA Contract Laboratory Program Statement of Work for Organic Analysis, Multi-Media, Multi-Concentration in effect as of the date on which the laboratory is performing the analysis.

“Site investigation” means the collection and evaluation of data adequate to determine whether or not discharged contaminants exist at a site or have migrated or are migrating from the site at levels of excess of the applicable remediation standards. A site investigation shall be developed based upon the information collected pursuant to the preliminary assessment. The requirements of a site investigation are set forth at N.J.A.C. 7:26E-3.

“Soil” means the unconsolidated mineral and organic matter on the surface of the earth that has been subjected to and influenced by geologic and other environmental factors.

“Specific discharge event” means a discharge that meets the criteria in N.J.A.C. 7:26E-3.7(b).

“Spill Act” means the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11a et seq.

“Surface water” means water defined as surface water pursuant to the Surface Water Quality Regulations, N.J.A.C. 7:9B.

“SWMA” means the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq.

“Tank” means a stationary device designed to contain an accumulation of hazardous substances, hazardous wastes, or pollutants which is constructed of non-earthen materials (for example, concrete, steel, plastic) that provide structural support.

“Target analyte list” or “TAL” means the list of inorganic compounds/elements designated for analysis as contained in the version of the EPA Contract Laboratory Program Statement of Work for Inorganics Analysis, Multi-Media, Multi-Concentration in effect as of the date on which the laboratory is performing the analysis. For the purpose of this chapter, a Target Analyte List scan means the analysis of a sample for Target Analyte List compounds/elements.

“Targeted compound” means a hazardous substance, hazardous waste, or pollutant for which a specific analytical method is designed to detect that potential contaminant both qualitatively and quantitatively.

“Target compound list plus 30” or “TCL + 30” means the list of organic compounds designated for analysis (TCL) as contained in the version of the EPA “Contract Laborato-

ry Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration” in effect as of the date on which the laboratory is performing the analysis, and up to 30 non-targeted organic compounds (plus 30) as detected by gas chromatography/mass spectroscopy (GC/MS) analysis. For the purposes of this chapter, a Target Compound List + 30 scan means the analysis of a sample for Target Compound List compounds and up to 10 non-targeted volatile organic compounds and up to 20 non-targeted semi-volatile organic compounds using GC/MS analytical methods. Non-targeted compound criteria shall be pursuant to the version of the EPA “Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration” in effect as of the date on which the laboratory is performing the analysis.

“Tentatively identified compound” or “TIC” means a non-targeted compound detected in a sample using a GC/MS analytical method which has been tentatively identified using a mass spectral library search. An estimated concentration of the TIC is also determined.

“Timely manner” means that, except for immediate environmental concern cases, the person responsible for conducting the remediation completes the remedial activities at a contaminated site or area of concern either:

1. Within five years, if soil is the only contaminated media at the site and the remediation will achieve unrestricted or limited restricted use standards; or
2. In compliance with a remedial action schedule approved in writing by the Department.

“Underground storage tank” means any one or combination of tanks, including appurtenant pipes, lines, fixtures, and other related equipment, used to contain an accumulation of hazardous substances, hazardous wastes or pollutants, the volume of which, including the volume of the appurtenant pipes, lines, fixtures and other related equipment, is 10 percent or more beneath the surface of the ground.

“Unknown compound” means a non-targeted compound which cannot be tentatively identified. Based on the analytical method used, the estimated concentration of the unknown compound may or may not be determined.

“Unrestricted use remedial action” means any remedial action for soil that does not require the continued use of either engineering or institutional controls to meet the established health risk or environmental standards.

“Unrestricted use standard” means a numeric soil remediation standard that, when achieved, restores the contaminated soil to a condition or quality suitable for any use. The unrestricted use standard is the lowest of any numeric standard, without limitation, any residential soil remediation standard, any non-residential soil remediation standard and any applicable impact-to-groundwater soil standard.

“UST” means the New Jersey Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21 et seq.

“Volatile organics” means organic compounds amenable to analysis by the purge and trap technique. For the purposes of this chapter, analysis of volatile organics means the analysis of a sample for either those priority pollutants listed as amenable for analysis using EPA method 624 or those target compounds identified as volatiles in the version of the EPA “Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration” in effect as of the date on which the laboratory is performing the analysis.

“Waste oil” means a petroleum based or synthetic oil which, through use, storage or handling has become unsuitable for its original purpose due to the presence of impurities or loss of original properties.

“Waters” means the ocean and its estuaries to the seaward limit of the State’s jurisdiction, all springs, streams and bodies of surface or ground water, whether natural or artificial, within the boundaries of this State.

“Wetland” means any freshwater or coastal wetland.

“WPCA” means the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.

Amended by R.1997 d.124, effective May 19, 1997 (operative July 18, 1997).

See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).

Added “Active ground water remediation”, “Background ground water contamination”, “Contamination”, “Damages”, “Effective solubility”, “Engineering controls”, “Environmentally sensitive area”, “Historic fill material”, “Immediate environmental concern”, “Injury”, “Institutional controls”, “Mineral oil”, “Natural background soil level”, “Natural ground water remediation”, “Non-permanent remedial action”, “Order of magnitude”, “Permanent remedial action”, “Region of the site”, “Remedial action costs”, “Remedial action selection”, “Remedial action selection report”, “Residual product”, “Residual saturation point”, “Restricted use standard”, “Retardation”, “Specific discharge event”, “Unrestricted use standard” and “Waste oil”; amended “Applicable remediation standard”, “Area of concern”, “Commissioner”, “Contaminated site”, “Department”, “Diligent inquiry”, “Discharge”, “Fill material”, “Free product”, “Person responsible for conducting the remediation”, “Preliminary assessment”, “Remedial action”, “Remedial investigation”, “Remediation”, “Site investigation”, “Surface water”, “Tank”, “Targeted compound”, and “Underground storage tank”; and deleted “Contaminant”, “ECRA”, “Hazardous constituent”, “Hazardous substance”, “Innovative and emerging treatment technologies”, “Permanent remedy”, and “Remedial alternative analysis”.

Amended by R.1997 d.499, effective November 17, 1997.

See: 29 N.J.R. 46(a), 29 N.J.R. 4957(a).

Added “Declaration of environmental restrictions”.

Amended by R.1999 d.241, effective August 2, 1999.

See: 30 N.J.R. 2373(a), 31 N.J.R. 2167(a).

Rewrote the section.

Amended by R.2003 d.29, effective February 3, 2003.

See: 34 N.J.R. 170(a), 35 N.J.R. 710(a).

Rewrote the section.

### 7:26E-1.9 Health and safety plan

Any person conducting remediation activities shall prepare a site-specific health and safety plan which shall be adhered to by all personnel involved in the remediation. The plan shall be in accordance with the most recently adopted and applicable general industry (29 CFR 1910) and construction (29 CFR 1926) standards of the Federal Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, as well as any other Federal, State or local applicable statutes or regulations.

### 7:26E-1.10 Severability

If any section, subsection, provision, clause or portion of these regulations is adjudged invalid or unconstitutional by a court of competent jurisdiction, the remainder of these regulations shall not be affected thereby.

### 7:26E-1.11 Bias for action

As a first priority during remediation, contaminants in all media should be contained and/or stabilized to prevent contaminant exposure to receptors and to prevent further movements of contaminants through any pathway.

### 7:26E-1.12 Requirement for Department oversight of remediation

(a) The person responsible for conducting the remediation shall investigate and remediate contaminated sites with Department oversight as specified in N.J.A.C. 7:26C and, in addition, in the following circumstances:

1. Sites suspected or known to be contaminated with anthropogenic radionuclide contamination of any media; and
2. Sites with immediate environmental concern conditions.

New Rule, R.1997 d.124, effective May 19, 1997 (operative July 18, 1997).

See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).

### 7:26E-1.13 Minimum groundwater and surface water remediation standards

(a) This section sets forth the minimum remediation standards that apply to groundwater and surface water for purposes of the remediation of a contaminated site pursuant to this chapter.

(b) The minimum groundwater remediation standards are:

1. The following numeric groundwater remediation standards:

- i. The Ground Water Quality Standards, N.J.A.C. 7:9-6, Appendix, Tables 1 and 2;