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.1997 d.124, effective February 18, 1997.
See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).

Executive Order No. 66(1978) Expiration Date

Chapter 26E, Technical Requirements for Site Remediation, expires on February 18, 2002.

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 was readopted as R.1997 d.124, effective February 18, 1997. See: Source and Effective Date. 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of R.1997 d.124, effective May, 19, 1997 (operative July 18, 1997), Subchapter 5, Remedial Alternative Analysis, was repealed and a new Subchapter 5, Remedial Action Selection, was adopted.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, 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 Marilynn 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).

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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 which 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 Hazardous Site Discharge 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 July 18, 1997 shall be in full compliance with this chapter, as readopted with amendments operative July 18, 1997 (see 29 N.J.R. 2278(b)), except that work conducted pursuant to workplans which were submitted to the Department prior to July 18, 1997 may be conducted pursuant to N.J.A.C. 7:26E as originally adopted, 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).
See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).
In (a)1, substituted "Industrial Site Recovery Act (ISRA)" for "Environmental Cleanup and Responsibility Act (ECRA)"; added (a)6 through (a)8; subdivided (c), inserting the introductory paragraph; in (c)1, substituted "shall evaluate" for "may evaluate" and inserted reference to original adoption; added (c)2; and added (d).
Administrative correction.
See: 29 N.J.R. 2664(b).
In (c)2, in the second clause, changed "May 19, 1997" to "July 18, 1997".

7:26E–1.4 Notification

(a) The person responsible for conducting the remediation shall notify the following persons in writing:

1. The Department, prior to the initiation of any sampling activities at a contaminated site which is not already known to the Department pursuant to either a Department regulatory reporting requirement or Department oversight of the remediation;

2. The municipal clerk of each municipality in which the site is located, if the site is not RCRA or CERCLA subject, 45 calendar days prior to:

i. The submission of the remedial action selection report to the Department pursuant to N.J.A.C. 7:26E–5.2; or

ii. The finalization of the engineering design plans for the selected remedial action of sites being remediated where Department pre-approval of a remedial action workplan is not required or sought; and

3. The Department, and the municipal clerk of each municipality in which the site is located, 45 calendar days prior to the implementation of the remedial action when Department pre-approval of the remedial action workplan is not required unless written notification has otherwise been provided.

(b) Whenever immediate environmental concern conditions are identified, the person responsible for conducting the remediation shall immediately notify the Department case manager, or the hotline (609–292–7172) if no case manager is assigned or the case manager is unavailable. Stabilization of the immediate environmental concern condition shall be initiated immediately under Department oversight pursuant to N.J.A.C. 7:26C. If an interim response action in response to an immediate environmental concern is to be conducted, the person responsible for conducting the action shall immediately notify the Department and the municipal clerk of each municipality in which the site is located of the intent to conduct the interim response action. If the remediation is being conducted in response to an emergency situation the notifications to the Department required pursuant to (a) above will be satisfied through compliance with N.J.A.C. 7:1E.

(c) The notifications to the municipal clerk pursuant to (a) and (b) above are not intended to satisfy the public participation requirements applicable to sites being investigated or remediated pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601 et seq. and the National Contingency Plan, 40 C.F.R. Part 300.

(d) The notifications pursuant to (a) above shall be in writing and shall include the following information:

1. The name and address of the person responsible for implementing the remedial action or interim response action;

2. The name of the site;

3. The valid EPA site identification number or the Department's site identification number, provided in that publication of the Department's Known Contaminated Sites List most recent to the action. If neither number is available, the number provided by the Department's hotline may be substituted (609–292–7172);

4. The street address of the site;

5. The lot and block of the site;

6. A brief description of the current use and occupancy of the site;

7. The nature of the sampling activities or remedial action to be performed;

8. The anticipated start date of the sampling activities or remedial action;

9. The location of the site in a GIS-compatible format (that is, latitude and longitude or State Plane Coordinates); and

10. A copy of any declaration of environmental restriction or similar document, which identified any engineering and institutional controls associated with the remedial action.

(e) The information required to be sent to the Department pursuant to (a) above shall be submitted to the assigned case manager or, if no case manager has been assigned, to the following address:

Division of Responsible Party Site Remediation
P.O. Box 434
Trenton, NJ 08625–0434
Attention: Case Assignment Section

(f) The person responsible for remediating a contaminated site located within the jurisdiction of the Pinelands Commission as defined pursuant to N.J.S.A. 13:18A–1 et seq. shall:

1. Submit copies of all final reports or workplans for preliminary assessments, site investigations, remedial investigations and remedial actions to the Pinelands Commission concurrently with submission of such documents to the Department;

2. Submit, for approval, a copy of the remedial design and construction documents along with a completed Pinelands application to the Pinelands Commission prior to implementing a remedial action; and

3. Not begin any construction activity at the site until the activity has been approved pursuant to the provisions of the Pinelands Comprehensive Management Plan (N.J.A.C. 7:50) including any Memorandum of Agreement entered into between the Department and the Pinelands Commission.

(g) The information required to be sent to the Pinelands Commission pursuant to (f)1 and 2 above shall be submitted to the following address:

The Pinelands Commission
P.O. Box 7
New Lisbon, NJ 08064

(h) The person responsible for conducting the remediation shall notify the Department pursuant to this subsection if that person determined that contamination migrated onto their site from another site. The person responsible for conducting the remediation shall notify their assigned case manager, or if they are not assigned a case manager, the Department hotline at (609) 292–7172.

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 (a)1, inserted "contaminated"; added (a)2; recodified former (a)2 as (a)3; in (b), inserted first two sentences; inserted new (c); recodified former (c) and (d) as (d) and (e), and inserted new (d)3, 9 and 10; recodified former (d)3 through 7 as (d)4 through 8; in (e), deleted "and (b)" following "pursuant to (a)", inserted "assigned case manager ... assigned, to the", and amended address; and added (f) through (h).

7:26E–1.5 Certifications

(a) If a document prepared pursuant to this chapter is to be submitted to the Department, it shall be signed and certified pursuant to N.J.A.C. 7:26C, 7:26B or 7:14B.

7:26E–1.6 Documenting compliance with the technical requirements

(a) All work being conducted at a site pursuant to this chapter, whether or not being done with Department oversight, shall be documented and included in reports which follow the format and contain the information required pursuant to the reporting sections of N.J.A.C. 7:26E–2 through 7. If a report has already been submitted to the Department pursuant to another Department regulatory program, including but not limited to, N.J.A.C. 7:14B, 7:26B or 7:26C, then a summary of what was included in the previously submitted report may be submitted. The summary shall include a reference to the Department program to which the report was submitted and the date that it was submitted. Any reports prepared pursuant to this chapter may be combined into a single report.

(b) When the remediation is conducted with Department oversight, the person responsible for conducting the remediation shall submit workplans (if applicable) and reports pursuant to the schedule contained in the oversight document which the person executed with the Department pursuant to N.J.A.C. 7:26C, or as the Department requires pursuant to ISRA or UST. The workplan and/or report shall comply with the format and contain the information required pursuant to N.J.A.C. 7:26E–2 through 7.

(c) In order to provide flexibility in the technical requirements for site remediation described in this chapter, the Department has identified certain limited situations, as specified through this chapter, when alternate sampling, analytical, or investigatory methods may be used without Department pre-approval.

1. Such alternate methods may be used if the person responsible for conducting the remediation documents in the applicable remedial phase report (that is, preliminary assessment, site investigation, remedial investigation, remedial action) rationale acceptable to the Department for using the alternate method.

2. The Department will review the documentation, either as part of the Department's oversight during the remediation or at a later time when the site becomes a Department priority for site remediation.

3. The Department will evaluate the alternate method in terms of its site-specific application, based upon the documentation provided and other appropriate information available to the Department, in terms of the extent to which the alternate method:

i. Has previously been either used successfully or approved by the Department in writing in other similar situations; or

ii. Reflects current technology as documented in peer-reviewed professional journals; and

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).

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 chapter 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 the 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.

"Applicable remediation standard" means the numeric or narrative standard to which contaminants must be remediated for soil, ground water or surface water, or other environmental media, to allow for a specified site use, as provided by the Department pursuant to rule, including without limitation the Ground Water Quality Standards, N.J.A.C. 7:9–6, the New Jersey State Surface Water Quality Standards, N.J.A.C. 7:9B, and the Federal Surface Water Quality Criteria, 40 C.F.R. Part 131, or site specific remediation standards as determined by the Department on a case by case basis.

"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 natural resources trustees, identified pursuant to 42 U.S.C. §§ 9601 et seq., have determined is necessary to restore, rehabilitate, replace or otherwise compensate for the injury to natural resources as a result of a discharge.

"Declaration of environmental restrictions" means a document which shall be identical in wording to N.J.A.C. 7:26E, Appendix F and which provides notice of the following for a specific real property:

1. That contamination exists on the property at a level where the Department's unrestricted use soil remediation criteria;

2. The restrictions applicable to the property due to contamination; and

3. The engineering controls and institutional 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 Standards 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 and access controls.

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

"Environmentally sensitive area" means all areas defined as such at N.J.A.C. 7:1E–1.8(a) and areas and/or resources that are protected or managed pursuant to the Pinelands Protection Act, P.L. 1979, c.111 (N.J.S.A. 13:18A–1 et seq.) and the Pinelands Comprehensive Management Plan.

"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.

"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.

"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 numeric 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.

"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.

"Non-permanent remedial action" means any remedial action that is not a permanent remedial action.

"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.

"Permanent remedial action" means a remedial action which allows for the unrestricted use of the entire site or area of concern including all land and natural resources without the need for engineering or institutional controls.

"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.

"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, containment, transportation, securing, or other engineering or institutional controls, whether of a permanent nature 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 any known, suspected, or threatened discharge of contaminants, including, as necessary, the preliminary assessment, site investigation, remedial investigation, remedial selection and remedial action.

"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 standard" means a numeric remediation standard which, when achieved, restores the contaminated media 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 necessary to determine whether or not contaminants exist at the site which fail to satisfy the applicable remediation standard. 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 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, 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 semivolatile 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.

"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 standard" means a numeric remediation standard that, when achieved, restores the contaminated media to a condition or quality suitable for any use. For a particular media, the unrestricted use standard is the lowest of any numeric standard including, without limitation, any residential use standard, any non-residential use standard and any applicable impact to ground water 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".

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).

SUBCHAPTER 2. QUALITY ASSURANCE FOR SAMPLING AND LABORATORY ANALYSIS

7:26E–2.1 Quality assurance requirements

(a) The person responsible for conducting the remediation shall ensure that the following quality assurance procedures be followed for all sampling and laboratory analysis activities.

1. Laboratories performing analyses shall conform to the following:

i. For the analysis of any aqueous samples for a parameter or category of parameters for which laboratory certification exists pursuant to N.J.A.C. 7:18, the laboratory shall be certified for that specific parameter or category of parameters pursuant to N.J.A.C. 7:18;

ii. For the analysis of non-aqueous samples using specific analytical methods contained in the EPA Publication SW–846, "Test Methods for Evaluating Solid Waste", third edition, update IIB, January 1995, as amended and supplemented, for a parameter or category of parameters for which certification exists pursuant to N.J.A.C. 7:18, the laboratory shall be certified for that specific parameter or category of parameters pursuant to N.J.A.C. 7:18 or, at a minimum, have obtained temporary approval to analyze regulatory samples pursuant to N.J.A.C. 7:18–2.5(c);

iii. For the analysis of samples using USEPA Contract Laboratory Program (CLP) analytical methods for a parameter or category or parameters for which certification exists pursuant to N.J.A.C. 7:18, the laboratory shall be certified for that specific parameter or category of parameters pursuant to N.J.A.C. 7:18 or, at a minimum, have obtained temporary approval to analyze regulatory samples pursuant to N.J.A.C. 7:18–2.5(c); or

iv. For the analysis of aqueous and non-aqueous samples for parameters or categories of parameters not contained in (a)1i through iii above, the person responsible for conducting the remediation is also responsible for ensuring that the selected laboratory is capable of performing the analysis. At such time as N.J.A.C. 7:18 incorporates procedures for parameters or categories of parameters not contained in (a)1i through iii above, the procedures in N.J.A.C. 7:18 shall be followed.

2. The Department shall reject analytical data as follows:

i. For laboratories performing analyses pursuant to (a)1i above, decertification or suspension of a laboratory pursuant to N.J.A.C. 7:18 for any given parameter or category of parameters shall result in the rejection of all analytical data for that given parameter or category of parameters generated after the date of decertification or suspension.

ii. For laboratories performing analyses pursuant to (a)1ii above, decertification or suspension of a laboratory pursuant to N.J.A.C. 7:18 for any given parameter or category of parameters shall result in the rejection of all analytical data for that given parameter or category of parameters generated after the date of decertification or suspension.

iii. For laboratories performing analyses pursuant to (a)1iii above, decertification or suspension of a laboratory pursuant to N.J.A.C. 7:18 for any given parameter or category of parameters shall result in the rejection of all analytical data for that given parameter or category of parameters generated after the date of decertification or suspension.

3. Except as provided in (a) 5 below, analytical methods used shall have been published or approved by organizations with recognized expertise in the development of standardized analytical methods. These organizations include, without limitation:

i. The EPA;

ii. The American Society for Testing and Materials (ASTM);

iii. The American Public Health Association (APHA);

iv. The National Institute for Occupational Safety and Health (NIOSH);

v. The Association of Official Analytical Chemists (AOAC);

vi. The U.S. Army Toxic and Hazardous Materials Agency (USATHAMA);

vii. The American Water Works Association (AWWA);

viii. The Department;

ix. The United States Department of Defense;

x. The United States Department of Energy; and

xi. The United States Department of Interior.

4. Non-aqueous samples to be analyzed for volatile organics shall be sampled using a methanol extraction/preservation method acceptable to the Department (an example of an acceptable methanol extraction/ preservation method is described in the "New Jersey Department of Environmental Protection Methodology for the Field Extraction/Preservation of Soil Samples with Methanol for Volatile Organic Compounds" which is available through the Department's Office of Maps and Publications). Sample analysis shall be conducted using an acceptable analytical method pursuant to this subchapter, such as USEPA SW846 Methods 8240B or 8260A, 8010B, 8015A, 8020A or 8021A (USEPA Publication "Test Methods for Evaluating Solild Waste", third edition, update IIB, January 1995, as amended and supplemented) or the USEPA Contract Laboratory Program Statement of Work for Organic Analysis, Multi-Media, Multi-Concentration, Revision OLMO3.2, as amended and supplemented.

5. If an analytical method as described in (a)3 above does not exist for a specific contaminant or parameter within a specific matrix, or if an analytical method as described in (a)3 above for a given contaminant or parameter is demonstrated to be inappropriate for the matrix analyzed, then the person responsible for conducting the remediation shall:

i. Select an appropriate method from another source;

ii. Document the rationale for selecting the method pursuant to N.J.A.C. 7:26E–1.6(c); and

iii. Develop a standard operating procedure for the method, including a quality control section.

6. If analytical methods are not available for a contaminant, analysis of indicator parameters (for example, pH may be used as an indicator parameter for acid or base discharges) may be acceptable, subject to the Department's review of documentation pursuant to N.J.A.C. 7:26E–1.6(c).

7. Laboratories shall follow all quality assurance/quality control procedures specified in the analytical methods.

8. For solid sample analysis, including without limitation, soils and sediments, all results shall be reported on a dry weight basis, except for those results required by the method to be otherwise reported.

9. Sample matrix cleanup methods shall be performed if:

i. Petroleum contaminated soils, sediments, or other solids are analyzed for semivolatile organics, and the method detection limits are elevated above the applicable remediation standard because of matrix interference;

ii. Gas chromatographic peaks are not adequately separated due to matrix interference. A peak shall be considered inadequately separated when a rise in baseline or extraneous peaks interferes with:

(1) The instrumental ability to correctly identify compounds present (including internal standards and surrogates); and/or

(2) The integration of peak area and subsequent quantification;

iii. So specified by the analytical method; or

iv. Matrix interferences prevent accurate quantification and/or identification of target compounds.

10. Acceptable matrix cleanup methods include, without limitation, those methods contained in the EPA Publication SW846 or the EPA "Contract Laboratory Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration" in effect as of the date of sample analysis.

11. Methods acceptable to the Department shall be utilized for the determination of the presence of free and/or residual product in soil or water. Such methods include, without limitation, visual identification of sheens or other visible product, measurable thickness of product on the water table, the use of field instruments, ultraviolet fluorescence, soil-water agitation, centrifuging, and hydrophobic dye testing.

i. For contaminants that in their pure phase and at standard state conditions (20 degrees Celsius to 25 degrees Celsius and one atmosphere pressure) have densities greater than water, free and/or residual product shall be considered to be present if the contaminant is detected in ground water at concentrations equal to or greater than one percent of the water solubility of the contaminant if ground water contains only that organic contaminant. If a mixture of such contaminants is present, then the effective water solubility of the contaminant shall be estimated for this determination.

12. Gas chromatography methods with a mass spectrometer detector system shall be used for analysis of volatile/semi-volatile contaminants (exclusive of herbicides, pesticides, and PCBs). Chromatography methods with a mass spectrometer detector system shall be used for the analysis of organic analytes amenable only to non-gas chromatographic methods. A mass spectrometer detector system is not required if:

i. Contaminant identity is known;

ii. The contaminant chromatographic peak is adequately resolved from any other peak. A peak is considered adequately resolved when:

(1) Adjacent or coeluting chromatographic peaks do not result in retention time shifts causing misidentification;

(2) Coeluting chromatographic peaks do not interfere with quantification of the contaminant's chromatographic peak; and

(3) Matrix interferences as described in (a)9ii above are not present; and

iii. At least 10 percent of the sample analyses are confirmed using the appropriate chromatograph/mass spectrometer detection system.

13. Laboratory data deliverables, as listed in Appendix A, shall be as follows unless otherwise specifically required pursuant to a NJPDES permit:

i. Full laboratory data deliverables shall be submitted for all potable water and polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans sample results, and for all hexavalent chromium soil sample results;

ii. Reduced laboratory data deliverables shall be submitted for all other analyses; and

iii. Analytical results without all quality control and raw data as required in full and reduced laboratory data deliverables, may be provided for all delineation samples which necessitate additional delineation sampling, and for all long-term ground water monitoring samples where the site has Department oversight, provided the following information is submitted:

(1) A cover page, including facility name and address, laboratory name and address, laboratory certification number, if applicable, date of analytical report preparation and signature of laboratory director;

(2) A listing of all field sample identification numbers and corresponding laboratory sample identification numbers;

(3) A listing of all analytical methods used;

(4) The method detection limit and practical quantitation level for each analyte for each sample analysis;

(5) All sample results including date of analysis;

(6) All method blank results; and

(7) All chain of custody documentation.

iv. Upon written request, the Department may require that a "reduced" data deliverables package shall be upgraded to a "full" data deliverables package for any sample analysis pursuant to N.J.A.C. 7:26E–1.7.

14. Sampling methods, sample preservation requirements, sample handling times, decontamination procedure for field equipment, and frequency for field blanks, field duplicates and trip blanks shall conform to applicable industry methods such as those specified in the NJDEP "Field Sampling Procedures Manual" in effect as of the date on which sampling is performed. The person responsible for conducting the remediation shall document the rationale for any deviations from the methods in the "Field Sampling Procedures Manual" pursuant to N.J.A.C. 7:26E–1.6(c).

15. Samples shall be preserved in the field immediately after collection and submitted to the laboratory as soon as possible and no later than 48 hours after sample collection.

(b) Field screening methods are limited as follows:

1. Field screening methods for all sampling matrices (soil, water, air, interior surfaces) can only be used under the following conditions:

i. For contaminant delineation if contaminant identity is known or if there is reasonable certainty that a specific contaminant may be present (for example, benzene, toluene, ethyl benzene, xylene in the case of sampling for a gasoline release); or

ii. To bias sample location to the location of greatest suspected contamination.

2. Field screening methods shall not be used to verify contaminant identity or clean zones. However, where 10 or more samples are required for initial characterization sampling at an area of concern, field screening methods listed in (b)3 and 4 below may be used to document that up to 50 percent of sampling points within the area of concern are not contaminated.

3. The field screening methods described in the version of the following references in effect as of the date of the field screening activities may be used:

i. The NJDEP "Field Sampling Procedures Manual";

ii. The NJDEP Site Remediation Program "Field Analysis Manual";

iii. "Field Measurements," EPA/530/UST–90–003; or

iv. The "Field Screening Methods Catalog," EPA/540/2–8 8/005.

4. Other field screening methods may be acceptable, subject to the Department's review of documentation pursuant to N.J.A.C. 7:26E–1.6(c).

(c) The following requirements apply for selection of analytical parameters:

1. Samples from each area of concern shall be analyzed for contaminants which may be present.

2. Analysis of Target Compound List plus 30/Target Analyte List (TCL + 30/TAL) or Priority Pollutant plus 40 (PP + 40) scans, petroleum hydrocarbons, and pH shall be conducted when contaminants in an area are unknown or not well documented, although a limited contaminant list may be used subject to the Department's review of documentation pursuant to N.J.A.C. 7:26E–1.6(c).

(d) For all petroleum storage and discharge areas, sample analysis shall be conducted pursuant to the requirements in Table 2–1. Samples taken in non-petroleum storage and discharge areas shall be analyzed for the stored material. Analysis of soil and sediment samples for petroleum hydrocarbons may be in accordance with the revision of NJDEP Method OQA QAM 025 10/91: "Quantitation of Semivolatile Petroleum Products in Water, Soil, Sediment and Sludge" in effect as of the date on which sampling is performed. Analysis shall be conducted by a laboratory that is certified for any gas chromatography method pursuant to N.J.A.C. 7:18. Laboratory deliverables shall be as specified in the NJDEP method listed above.

TABLE 2–1
ANALYTICAL REQUIREMENTS FOR
PETROLEUM STORAGE AND DISCHARGE AREAS[1]

Sampling Objective	Soil Initial Screening/ Post-Remediation[1]	Water Initial Screening
Gasoline, Mineral Spirits	VO + 10[2], Lead[7]	VO + 10[2], MTBE[3] TBA[3], Lead[7]
Kerosene, Jet Fuel	VO + 10[2] Naphthalenes[5]	B/N + 15[2], VO + 10[2]
Fuel Oil No. 2, Diesel Fuel	TPHC[9]	B/N + 15[10], VO + 10[2]
Fuel Oil Nos. 4 & 6, Hydraulic Oils, Cutting Oil, Crude Oil, Lubricating Oil	TPHC, PAH[8],	B/N + 15[10], VO + 10[2]
Waste Oil	TPHC[6], VO + 10 B/N + 15[10], PCBs, Priority Pollutant Metals or EPA Target Analyte List	PP + 40 or TCL/TAL[4]
Waste Vehicular Crankcase Oil Waste Mineral Oil	TPHC[6], VO + 10[2] B/N + 15[10], PCBs, lead TPHC	VO + 10[2], B/N + 15[10]

Footnotes

1. Analytical parameters may be limited based on previous analytical results.
2. EPA target compound list volatile organic or priority pollutant volatile organic scans including xylene with a library search.
3. Methyl-tertiary-butyl-ether (MTBE), tertiary-butyl alcohol (TBA) analysis required if gasoline tanks were in service after 1979 and 1969 respectively.
4. Priority Pollutant plus forty (PP + 40) including xylene, excluding PCB/pesticide analysis, or EPA Target Compound List plus 30 and EPA Target Analyte List, excluding PCB/pesticide analysis.
5. Naphthalene, including Naphthalene, Methyl Naphthalenes, Dimethyl Naphthalenes; may be analyzed in B/N + 15 fraction or in VO fractions; if analyzed in VO fraction, instrument must be calibrated for these analytes. Quantitation of all isomers found shall be performed against at least one Methyl Naphthalene standard and at least one Di-Methyl Naphthalene standard.
6. Total Petroleum Hydrocarbon (TPHC) analysis required on all samples. Other parameters required on 25 percent of samples where TPHC was detected (minimum of one sample); other parameters shall be analyzed for in the sample with the highest TPHC.
7. Lead Analysis required if source was or is leaded gasoline.
8. TPHC analysis required on all samples. Polynuclear aromatic hydrocarbons (per EPA Priority Pollutant List) analysis required on 25 percent of samples where TPHC exceeds 100 ppm (minimum of one sample); samples for PAH analysis shall be those with the highest TPHC concentration.
9. TPHC analysis required on all samples; VO + 10 analysis required on 25 percent of samples in which TPHC level in soil exceeds 1000 PPM (minimum of one sample); samples for VO analyses shall be those with the highest TPHC concentration.
10. EPA Target Compound List Base Neutral or Priority Pollutant Base Neutral scan with a library search.
11. Analyses are required on all samples unless otherwise noted.

(e) If tentatively identified compounds or unknown compounds are detected at concentrations in excess of the applicable remediation standard, they shall be addressed in either of two ways:

1. If the area will be remediated and it is likely that the concentration of the tentatively identified compounds/unknown compounds will be reduced by the remediation, the tentatively identified compounds/unknown compounds shall be analyzed in post remediation samples to document that it is no longer present in excess of the applicable remediation standard; or

2. An attempt shall be made to positively identify and accurately quantify the tentatively identified compounds/unknown compounds using an analytical method consistent with this section so that a remediation standard can be developed.

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).
Substantially amended the section.

7:26E–2.2 Quality assurance project plan

(a) If the Department requires a Quality Assurance Project Plan (QAPP) pursuant to an oversight document or the ISRA, UST, or any other regulatory program, the person responsible for conducting the remediation shall submit the Quality Assurance Project Plan in accordance with the schedule contained in the oversight document or applicable regulation, and in a format that corresponds directly to the outline of this section.

1. For each remedial phase at a site involving less than 10 areas of concern, the following shall be included in the Quality Assurance Project Plan:

i. The project's scope and complexity and how the project relates to the overall site remediation strategy;

ii. The data quality objectives specific to the site and sampling event (for example, initial site characterization, delineation of contamination, selection of a remedial action);

iii. The names, addresses and Department laboratory certification number (if applicable) of the laboratories to be used for sample analysis. This shall be updated if changes occur during the project;

iv. The name and telephone number of each of the individuals responsible for the following functions. (This shall be updated if changes occur during the project):

(1) Overall project coordination;

(2) Sampling activities, including quality assurance and quality control; and

(3) Laboratory activities, including quality assurance and quality control;

v. An "Analytical Methods/Quality Assurance Summary Table" which shall include the following information for all environmental, performance evaluation, and quality control samples:

(1) Matrix type;

(2) Number or frequency of samples to be collected per matrix;

(3) Number of field and trip blanks per matrix;

(4) Analytical parameters to be measured per matrix;

(5) Analytical methods to be used per matrix pursuant to N.J.A.C. 7:26E–2.1;

(6) If proposed, the number and type of matrix spike and matrix spike duplicate samples to be collected;

(7) If proposed, the number and type of duplicate samples to be collected;

(8) If proposed, the number and type of split samples to be collected;

(9) If proposed, the number and type of performance evaluation samples to be analyzed;

(10) Sample preservation to be used per analytical method and sample matrix;

(11) Sample container volume and type to be used per analytical method and sample matrix; and

(12) Sample holding time to be used per analytical method and sample matrix;

vi. A detailed description of site specific sampling methods to be used pursuant to N.J.A.C. 7:26E–2.1(a) 14, sample storage in the field and sampling handling time requirements;

vii. A detailed description of all calibration and preventative maintenance procedures for all field analytical instrumentation;

viii. A detailed description of procedures used to obtain duplicate and split samples, if applicable;

ix. A detailed description of the chain of custody procedures to be utilized in the field and in the laboratory;

x. A detailed description of sample storage procedures to be utilized by the laboratory; and

xi. Laboratory data deliverable formats to be used.

2. For any remedial phase at a site involving 10 or more areas of concern, the following shall be included in the Quality Assurance Project Plan:

i. The requirements contained in (a)1i through x above;

ii. A detailed description of field quality control audit procedures to be used, including without limitation, corrective action procedures;

iii. The procedures to be followed to ensure the complete documentation of all field sampling activities; and

iv. A detailed description of the data reporting procedures and format for all analytical data generated by the laboratory, including without limitation, the following:

(1) Laboratory data deliverable format(s);

(2) The laboratory's review and cross-check procedures for the elimination of errors during routine data transfer, in calculations, preparation of data deliverable packages and off-line storage; and

(3) If required by the Department, a description of the laboratory's capability to provide EPA Contract Laboratory Program analytical methodology data on diskette in standard EPA Contract Laboratory Program format utilizing the requirements in the versions of the applicable EPA Contract Laboratory Program Statements of Work documents in effect as of the date on which the laboratory is performing the analysis.

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 (a), substituted "ISRA" for "ECRA"; and in (a)1vi, amended N.J.A.C. reference.

SUBCHAPTER 3. PRELIMINARY ASSESSMENT AND SITE INVESTIGATION

7:26E–3.1 Preliminary assessments

(a) The purpose of a preliminary assessment is to identify the presence of any potentially contaminated areas of concern. If any potentially contaminated areas of concern are identified, then there is a need for a site investigation pursuant to N.J.A.C. 7:26E–3.3. If no potentially contaminated areas of concern are identified, then no further remediation is required at the site.

(b) A preliminary assessment is the first step in the process to determine whether or not a site is contaminated.

(c) A preliminary assessment shall be based on diligent inquiry and include an evaluation of the following:

1. Historical information concerning the site history shall be part of the preliminary assessment unless the remediation is directed at either a specific discharge event (rather than a particular area of concern) or any underground tank or underground tank system. The site history shall include an evaluation of the following to the extent available from diligent inquiry:

i. Site history information from sources including, but not limited to, the following:

(1) Sanborn Fire Insurance Maps;

(2) MacRae's Industrial Directory;

(3) Title and Deed;

(4) Site plans and facility as-built drawings;

(5) Federal, State, county and local government files; and

(6) The Department Geographic Information System;

ii. The industrial/commercial site history from the time the site was naturally vegetated or utilized as farmland, including without limitation:

(1) Names of all owners and operators;

(2) Dates of ownership of each owner;

(3) Dates of operation of each operator; and

(4) Brief descriptions of the past industrial/commercial usage of the site by each owner and operator;

iii. All raw materials, finished products, formulations and hazardous substances, hazardous wastes, and pollutants which are or were present on the site, including intermediates and by-products;

iv. Present and past production processes, including dates, and their respective water use and shall be identified and evaluated, including ultimate and potential discharge and disposal points and how and where materials are or were received onsite (for example, rail, truck);

v. All former and current containers, container or bulk storage areas, above and below ground tanks, above and below ground waste and product delivery lines, surface impoundments, landfills, septic systems and other structures, vessels, conveyances or units that contain or previously contained hazardous substances, hazardous waste, and pollutants, including:

(1) Type;

(2) Age;

(3) Dimension of each container;

(4) Location;

(5) Chemical content;

(6) Integrity (for example, tank test reports);

(7) Volume;

(8) Construction materials; and

(9) Inventory control records unless a Department-approved leak detection system pursuant to N.J.A.C. 7:1E or 7:14B has always been in place and there is no discharge history;

vi. If the site area exceeds two acres, an interpretation of the aerial photographical history of the site, based on available current and historical color, black and white and infrared aerial photographs (scale 1:18,000 or less) of the site and surrounding area at a frequency which provides the evaluator with a historical perspective of site activities. The photographic history shall date back to 1932 or to the earliest photograph available. Aerial photographic coverage is available for review at the New Jersey Department of Environmental Protection and Energy, Tidelands Management Program, Aerial Photo Library, 9 Ewing Street, Trenton, New Jersey;

vii. Any data or information concerning known discharges that have occurred on the site;

viii. Remediation activities previously conducted or currently underway at the site including dates of previous discharges, remedial actions, and all existing sampling data concerning contaminants at the site. If a government agency was involved, the name of the lead government agency, case identification number, and current case status;

ix. All remedies previously approved by the Department in a remedial action workplan or equivalent document to determine if the remedy remains protective of public health, safety and the environment;

x. All existing environmental sampling data concerning contaminants at the site;

xi. Any known changes in site conditions or new information developed since completion of previous sampling or remediation;

xii. All Federal, State and local environmental permits including permits for all previous and current owners or operators, applied for or received, or both, for the site including:

(1) The name and address of permitting agency;

(2) The reason for the permit;

(3) The permit identification number;

(4) The application date;

(5) The date of approval, denial, or status of application;

(6) The name and current address of all permittees;

(7) The reason for denial, revocation or suspension if applicable; and

(8) The permit expiration date;

xiii. All administrative, civil and criminal enforcement actions for alleged violations of environmental laws concerning the site, including:

(1) The name and address of agency that initiated the enforcement action;

(2) Date of the enforcement action;

(3) The section of statute, rule or permit allegedly violated;

(4) The type of enforcement action;

(5) A description of alleged violations;

(6) The resolution or status of violation and enforcement action; and

(7) A description of any potential environmental impact which may have resulted from the alleged violation; and

xiv. All areas where non-indigenous fill materials were used to replace soil or raise the topographic elevation of the site, including the dates of emplacement.

2. The person conducting the preliminary assessment shall conduct a site visit to verify the findings in (c)1 above.

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 (a), substituted "remediation" for "action"; inserted new (c)1i(6), (c)1ix and (c)1xiv; recodified former (c)1ix through xii as (c)1x through xiii ; and in (c)1iii and v, deleted reference to hazardous constituents.

7:26E–3.2 Preliminary assessment report

(a) The person responsible for conducting the remediation shall prepare a preliminary assessment report which:

1. Presents and discusses all of the information identified, evaluated or collected pursuant to N.J.A.C. 7:26E–3.1;

2. Is presented in a format that corresponds to the outline of N.J.A.C. 7:26E–3.1(c);

3. Shall also include:

i. Scaled site plans detailing lot and block numbers, property and leasehold boundaries, construction or destruction of buildings, areas where fill or cover material has been brought onsite, paved and unpaved areas, vegetated and unvegetated areas, all areas of concern and active and inactive wells; and

ii. Scaled historical site plans and facility as-built construction drawings, if available;

iii. A copy of the United States Geologic Survey (USGS) 7.5 minute topographic quadrangle that includes the site and an area of at least a one mile radius around the site. This map shall be the most recent USGS revision and shall clearly note the facility location and property boundaries. When a portion of the USGS quadrangle is used, the scale, north arrow, contour interval, longitude and latitude, along with the name and date of the USGS quadrangle shall be noted on the map; and

iv. A summary of the data and information evaluated pursuant to N.J.A.C. 7:26E–3.1(c)1vii, viii, ix, and x shall be presented by area of concern and all phases of work for a particular area of concern shall be integrated into a single discussion of that area;

4. For each area of concern identified at the site, which has not been remediated under Department oversight, the report shall contain a recommendation that either:

i. The area of concern is potentially contaminated, and thus additional investigation or remediation is required; or

ii. The area of concern is not believed to contain contaminants above the applicable remediation standards, in which case the preliminary assessment report shall include documentation for this belief; and

5. For each area of concern identified at the site, for which a No Further Action Letter was issued, the person responsible for conducting the remediation shall compare the contaminant concentrations remaining in the area of concern or the site with the Department's applicable remediation standards at the time of comparison, and the report shall contain a recommendation that either:

i. The area of concern contains contaminants above the numerical remediation standard applicable at the time of comparison, however, no further remediation is required because:

(1) The contaminant concentrations remaining in the area of concern or the site are less than an order of magnitude greater than the numerical remediation standard applicable at the time of comparison;

(2) The area of concern or the site was remediated using engineering and institutional controls approved by the Department and these controls are still protective of public health, safety and the environment; or

(3) The area of concern or the site were remediated to an approved site specific remediation standard and all of the factors and assumptions which are the basis for deriving the site specific remediation standard remain valid for the site;

ii. The area of concern or site contains contaminants above the numerical remediation standards applicable at the time of comparison and further remediation is required because:

(1) The contaminant concentrations remaining in the area of concern or the site are more than an order of magnitude greater than the numerical remediation standard applicable at the time of comparison;

(2) The area of concern or site was remediated using engineering and institutional controls approved by the Department and these controls are no longer protective of public health, safety and the environment; or

(3) The area of concern or the site were remediated to an approved site specific remediation standard and some or all of the factors and assumptions which were the basis for deriving the site specific remediation standard are no longer valid;

iii. The area of concern or site does not contain contaminants above the numerical remediation standard applicable at the time of comparison and no further remediation is required; or

iv. The contaminant concentration remaining in the area of concern or the site are more than order of magnitude greater than the numerical remediation standard applicable at the time of comparison. However, no further remediation is required by the person conducting the preliminary assessment, because, in accordance with N.J.S.A. 58:10B–13(e), that person is not liable for the contamination pursuant to N.J.S.A. 58:10–23.11g.

(b) The documentation required for (a)5 above shall include a table comparing the levels of contaminants remaining in the area of concern, the numerical remediation standards which are contained in the approved remedial action workplan and the numerical remediation standards applicable at the time of comparison. The table shall contain all sampling results, including, but not limited to, sample location, sample media, field and laboratory identification numbers, method detection limits as necessary, and analytical results for the area of concern.

(c) The Department will determine the extent to which prior submissions or completions may satisfy the specific items required for the preliminary assessment. If the Department approves any such prior work in writing, then that work may be included as part of the preliminary assessment.

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 (a)3iv, inserted additional N.J.A.C. references; in (a)4, inserted ", which has not been remediated under Department oversight,"; added (a)5; inserted new (b); and recodified former (b) as (c).

7:26E–3.3 Site investigations

(a) The purpose of a site investigation is to determine if any contaminants are present at the site above any of the applicable unrestricted use remediation standards or if no further remediation is required. If such contaminants are present at the site, then additional remediation is necessary.

(b) A site investigation shall be conducted based upon the information collected pursuant to the preliminary assessment requirements in N.J.A.C. 7:26E–3.1 and shall satisfy all of the following requirements:

1. The general sampling requirements in N.J.A.C. 7:26E–3.4;

2. The building interior sampling requirements in N.J.A.C. 7:26E–3.5, if applicable;

3. The soil sampling requirements in N.J.A.C. 7:26E–3.6;

4. The ground water sampling requirements in N.J.A.C. 7:26E–3.7, if applicable;

5. The surface water and sediment sampling requirements in N.J.A.C. 7:26E–3.8, if applicable;

6. The area specific sampling requirements in N.J.A.C. 7:26E–3.9;

7. The background soil sampling requirements in N.J.A.C. 7:26E–3.10, if applicable;

8. The ecological evaluation requirements in N.J.A.C. 7:26E–3.11; and

9. The historic fill requirements in N.J.A.C. 7:26E–3.12, if applicable.

(c) If required pursuant to an oversight document or other applicable rule, the person responsible for conducting the remediation shall submit reports pursuant to N.J.A.C. 7:26E–3.13 in accordance with the schedules contained in the oversight document or other applicable rule.

(d) It is often appropriate to phase the site investigation so that the areas of concern most likely to be contaminated above the applicable remediation standards are sampled first. If at any time during the site investigation, any contamination is found above the applicable remediation standards, then the site investigation may be discontinued and the remediation continued at either the remedial investigation or remedial action phase.

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 (a), inserted "unrestricted use", substituted "remediation is required" for "action is required" and deleted "prior to a Department determination that no further action is necessary" following "remediation is necessary"; added (b)7 through (b)9; and in (c), amended N.J.A.C. reference.

7:26E–3.4 Site investigation—general sampling requirements

(a) Sampling shall be conducted in all potentially contaminated areas of concern, whether relating to current or former uses of the site to determine whether or not any contaminants are present above the applicable unrestricted use remediation standard.

1. Sampling shall be biased to the suspected location of greatest contamination.

2. Samples shall be biased based on professional judgment, area history, discolored soil, stressed vegetation, drainage patterns, field instrument measurements, odor, or other field indicators.

3. Sampling locations shall comply with requirements listed in N.J.A.C. 7:26E–3.5 through 3.9.

4. If access to sampling locations required pursuant to N.J.A.C. 7:26E–3.5 through 3.12 is impractical due to physical obstructions or safety hazards, and no practical sampling alternatives are available, upon prior verbal or written approval by the Department, sampling may be modified subject to the technical criteria in N.J.A.C.

7:26E–1.6(c)3. Confirmation of any verbal or written approval by the Department shall be provided in the site investigation report. For verbal approvals, the date of the verbal approval and the name of the Department representative who granted the approval shall be provided in written correspondence to the Department within seven days of the verbal approval.

(b) All sampling methods and laboratory analyses shall be conducted pursuant to N.J.A.C. 7:26E–2.1.

(c) Composite sampling shall not be conducted, except as necessary for waste classification pursuant to N.J.A.C. 7:26–8.

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 (a), inserted "unrestricted use" and added (a)4.

7:26E–3.5 Site investigation—building interiors

The site investigation of building interiors shall be conducted when contaminants inside the building have the potential to migrate to the environment outside the building or when contaminants outside the building have the potential to migrate into the building. Minimum requirements for investigating contaminants inside buildings which have the potential to migrate to the environment outside the building are specified in N.J.A.C. 7:26E–3.9, and requirements for investigating contaminants outside buildings which have the potential to migrate into buildings shall be specified by the Department on a site specific basis.

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).
Rewrote section.

7:26E–3.6 Site investigation—soil

(a) The site investigation shall satisfy the following requirements for all soil investigations:

1. A survey for buried drums, tanks or waste using test pits, ground penetrating radar, magnetometry electromagnetics, or other techniques capable of detecting metal containers and other waste to an average depth of 20 feet or deeper shall be conducted if:

i. There have been any reports of buried drums, tanks or waste;

ii. Ground water contamination is detected and no source has been identified; or

iii. Aerial photographic history of the site indicates the presence of drums, tanks or waste in or adjacent to regraded and/or filled areas.

2. Soil samples shall be collected for chemical analysis and to provide a profile of subsurface conditions. The profile shall meet the following:

i. Logs shall be prepared for all soil samples to document subsurface conditions including, without limitation, soil types and description of non–soil materials, field instrument measurements, depth to ground water, if ground water is encountered and document, if present, soil mottling, presence of odor, vapors, soil discoloration, and free and/or residual product, as determined pursuant to N.J.A.C. 7:26E–2.1(a)11;

ii. Soil shall be classified according to one of the standard systems (for example, Burmeister, Unified, or United States Department of Agriculture);

iii. All borings shall be performed in accordance with the Subsurface and Percolating Waters Act, N.J.S.A. 58:4A–4.1 et seq. In addition, a monitoring well permit shall be obtained from the Department prior to drilling any soil boring greater than 25 feet below grade. For soil borings to a depth of less than 25 feet below grade, the Department recommends soil not be returned to the boring hole. If contaminated materials are returned to the boring hole, then the person responsible for conducting the remediation shall address the presence of this contamination as part of the remedial action workplan; and

iv. Soil sample locations may be photo-documented.

3. Initial characterization soil samples (except samples being analyzed for volatile organics) shall be collected at zero to six inches below grade except as required pursuant to N.J.A.C. 7:26E–3.9 (Area Specific).

4. All initial characterization soil samples for suspected surface discharges to be analyzed for volatile organics shall be collected using a coring device, if practicable, to minimize contaminant loss during sampling. Each core shall be field screened with a properly calibrated photoionization detector or flame ionization detector (PID/FID) or other suitable instrument pursuant to N.J.A.C. 7:26E–2.1(b).

i. When field screening is used the following shall apply:

(1) At a minimum, the initial 24 inches of soil shall be cored and field screened for the presence of volatile organics;

(2) If field measurement readings are detected above background, the coring shall be extended until background readings are achieved, or ground water or bedrock is encountered;

(3) An undisturbed sample from the six inch interval registering the highest field measurement reading shall be collected and analyzed for volatile organics;

(4) If all intervals register the same measurement or although not recommended, a PID/FID or similar instrument was not used when collecting samples, soil samples shall be collected as follows:

iii. The distribution of the chemical in the soil does not follow a concentration gradient indicative of a discharge; and

iv. Soil boring logs indicate the samples were not collected from historic fill material; or

3. Conduct a background soil investigation as follows:

i. A minimum of 10 background samples shall be collected from onsite or in the region of the site. Two samples shall be collected from each of five locations with one sample collected at a depth of zero to six inches and one sample at a depth of greater than 12 inches at each location;

ii. Background samples shall be collected at locations unaffected by current and historic site operations as documented by the preliminary assessment, including aerial photographs. Wherever possible, background samples shall be collected from locations which are topographically upgradient and upwind of contaminant sources;

iii. Background samples shall not be collected from the following areas:

(1) Parking lots, roads, or roadside areas;

(2) Areas where potential contaminants were loaded, handled, or stored;

(3) Waste disposal areas;

(4) Areas near railroad tracks;

(5) Areas of historic fill material;

(6) Areas receiving runoff from areas (a)3iii(1) to (5) above or from adjacent sites;

(7) Storm drains or ditches receiving runoff from the site or adjacent sites; or

(8) Any other area of concern;

iv. Background samples shall be collected and analyzed using the same methods as were used for area of concern samples;

v. Background samples shall be collected from soil types similar to the area of concern samples. Similar soil types shall be identified using standard classification systems pursuant to N.J.A.C. 7:26E–3.6(a)2ii;

vi. The background data set shall be examined for statistical outliers as follows:

(1) An outlier is defined as a concentration greater than 1.5 times the range of the 25th to 75th percentile, plus the concentration of the 75th percentile. For example, if the 75th percentile concentration in a data set is nine ppm and the 25th percentile is three ppm, subtract three from nine and multiply the result by 1.5. This would equal nine ppm. Add the result to the 75th percentile for a concentration of 18 ppm. Any sample point above 18 ppm would be considered an outlier. The background sample data shall be transformed to natural logarithms before performing the outlier test because it is assumed that natural background chemical concentrations are log normally distributed; and

(2) An outlier shall not be considered part of background unless the chemical concentration is confirmed with the analysis of an additional sample from the outlier location. If the difference between the original and confirmation sample results is no greater than 20 percent, the average concentration of the two samples shall be considered the highest background concentration;

vii. The highest contaminant concentration found in the background samples shall be applied as an upper limit for the contaminant concentrations found on the site. If contaminant concentrations are found at any sampling location on the site exceeding the highest concentration found in the background samples, a remedial investigation shall be conducted; and

viii. Samples collected for area of concern investigation shall not be averaged for background comparisons.

(b) If during the site investigation a contaminant concentration is found in any area of concern in excess of the applicable remediation standard, it may be demonstrated to the Department that the elevated contaminant concentration is not due to an onsite discharge on a case by case basis.

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).
Former section recodified to N.J.A.C. 7:26E–3.13.

7:26E–3.11 Site investigation—ecological evaluation

(a) A baseline ecological evaluation shall be completed for each contaminated site or area of concern. This baseline evaluation shall be qualitative in nature and based on site investigation sample results and a site inspection by a person experienced in the use of techniques and methodologies for conducting ecological risk assessments in accordance with EPA guidance. This evaluation shall be used to determine when further sampling and evaluation is required, pursuant to N.J.A.C. 7:26E–4.7. The results of the baseline evaluation shall be included as part of the site investigation report submitted to the Department. The baseline ecological evaluation shall:

1. Evaluate the nature of contaminants detected at the site or area of concern and identify all contaminants of ecological concern. Contaminants of ecological concern shall include, without limitation, those that exhibit the ability to biomagnify or bioaccumulate, or contaminants exhibiting concentrations that exceed available criteria or guidelines recommended by the Department, NOAA, EPA or other Federal natural resource agencies for use in

conducting ecological assessments and investigations. Such criteria or guidelines shall include, without limitation:

i. For sediments:

(1) EPA, Briefing Report to the EPA Science Advisory Board on the Equilibrium Partitioning Approach to Generate Sediment Quality Criteria, EPA 440/5–89–002;

(2) EPA, Technical Basis for Deriving Sediment Quality Criteria for Nonionic Organic Contaminants for the Protection of Benthic Organisms by Using Equilibrium Partitioning, EPA–822–R–93–011;

(3) Long, E.R., and D.D. MacDonald, S.L. Smith and F.D. Calder, Incidence of adverse biological effects within ranges of chemical concentrations in marine and estuarine sediments, Environmental Management 19:81–97, 1995; and

(4) Persaud, D., R. Jaagumagi, and A. Hayton, Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario, Environmental Monitoring and Reporting Branch, Ontario Ministry of the Environment, Ottawa, 24p., 1993;

ii. For surface water:

(1) Federal Surface Water Quality Criteria for Acute/Chronic Aquatic Life Protection, 40 C.F.R. Part 131; and

(2) New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B;

iii. For soil:

(1) Contaminant Hazard Reviews, Fish and Wildlife Service, U.S. Department of the Interior, various dates, Eisler, R.; and

(2) Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants: 1994 Revision, Oak Ridge National Laboratory, Oak Ridge, TN, Will, M.E. and G.W. Suter II;

iv. Other peer–reviewed published literature on the impact that specific contaminants have on non–human species;

2. Identify environmentally sensitive areas within the site boundaries and on properties immediately adjacent to the site. The boundaries of these sensitive areas shall be defined to the extent necessary to estimate the sensitive area size and location with respect to the contaminated site or area of concern. The Department Geographic Information System shall be used as a source of information for identifying these sensitive areas;

3. Identify potential contaminant migration pathways to any environmentally sensitive areas identified in (a)2 above; or any observations of potential impact to the identified environmentally sensitive areas that might be attributed to site contamination; such observations shall include, but not be limited to:

i. Stressed or dead vegetation;

ii. Discolored soil, sediment or water;

iii. Absence of biota in a specified area of the system as compared to other similar areas of the same system; or

iv. Presence of a seep or discharge; and

4. Draw conclusions regarding the need to conduct further investigations. Continued ecological investigations shall be required during the remedial investigation, pursuant to N.J.A.C. 7:26E–4.7, whenever the baseline evaluation indicates the co–occurrence of the following conditions:

i. Contaminants of ecological concern exist onsite;

ii. An environmentally sensitive area exists on, or immediately adjacent to, the site; and

iii. Potential contaminant migration pathways to an environmentally sensitive area exist, or an impact to an environmentally sensitive area is indicated based on visual observation.

New Rule, R.1997 d.124, effective May 19, 1997 (operative July 18, 1997; 7:26E–3.11(a)2 operative November 19, 1997).
See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).

7:26E–3.12 Site investigation—historic fill material

(a) If historic fill material is present at the site, it may be assumed that the fill material is contaminated above an applicable unrestricted use remediation standard and a remedial investigation of the historic fill material may be conducted pursuant to N.J.A.C. 7:26E–4.6(b).

(b) As an alternative to (a) above, if historic fill material is present at the site, it may be demonstrated that the historic fill material is not contaminated above the applicable unrestricted use remediation standards on a case–by–case basis.

(c) An appropriate number of ground water samples (minimum of one sample) are required when a high degree of certainty is needed to document that ground water is not contaminated, including, without limitation, if the historic fill site is in an area where ground water is used for potable water. All ground water sampling shall be conducted pursuant to N.J.A.C. 7:26E–3.7(c).

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–3.13 Site investigation report

(a) The site investigation report shall present and discuss all of the information identified or collected pursuant to N.J.A.C. 7:26E–3.3 through 3.12.

(b) The site investigation report shall include the following:

1. Historical information pursuant to N.J.A.C. 7:26E–3.2 (preliminary assessment report) unless the remediation is directed at either a specific discharge event, rather than a particular area of a site, or any underground tank or underground tank system;

2. A physical setting section which shall include descriptions of the following unless the remediation is directed at either a specific discharge event, rather than a ***particular*** area of concern, or any underground tank or underground tank system:

i. The physical conditions of the site and surroundings, including a general description of soils, geology, hydrogeology, and topography; and

ii. Use of, distance to, flow direction, and names of surface water bodies within one-half mile of the site with emphasis upon water bodies topographically or hydraulically downgradient of the site that may receive site discharges or runoff.

3. A technical overview which shall present a general profile of the site investigation execution and results. The following items shall be discussed in the technical overview:

i. Reliability of laboratory analytical data as indicated by compliance with sample holding times, ability to achieve method detection limits and precision and accuracy criteria for the analytical method, and other indicators of data quality;

ii. A summary of the overall nature of contamination on the site, including, without limitation, the numbers of areas of concern requiring further remediation; and

iii. Any significant events or seasonal variation which may have influenced sampling procedures or analytical results; and

4. Findings/recommendations which shall include;

i. A discussion, by area of concern, of the site investigation execution and analytical results. The discussion shall consist of specific findings at the areas of concern;

ii. A discussion of the following items, for each area of concern:

(1) A detailed description of each area of concern including dimensions, suspected and actual contamination, and suspected source of discharge;

(2) Results and implications of field measurements or area-specific changes in sampling protocol due to field conditions;

(3) Significance of information generated in the library search of tentatively identified compounds/unknown compounds; and

(4) Recommendations for either additional remediation or no further remediation for each area of concern.

(c) The site investigation report shall also include the following data and information:

1. Results of all analyses, copies of all laboratory data sheets and the required laboratory data deliverables pursuant to N.J.A.C. 7:26E–2.1 (Quality Assurance Requirements). Laboratory data deliverables may be submitted as a separate attachment;

2. A summary table of analytical methods and quality assurance indicators pursuant to N.J.A.C. 7:26E–2.2(a)1v;

3. A table summarizing all sampling results, including sample location, media, sample depth, field and laboratory identification numbers, analytical results, and comparison to applicable remediation standards organized by area of concern:

i. All contaminant concentrations exceeding the applicable remediation standards shall be identified;

ii. Samples with method detection limits (MDLs) (or practical quantitation levels (PQLs) if available) exceeding the applicable remediation standard shall be identified and an explanation provided in the table key;

iii. Soils/solids sample results shall be reported in milligrams per kilogram on a dry weight basis, and aqueous sample results shall be reported in micrograms per liter;

iv. All ground water data for the same aquifer zone shall be located in the same section of the table; and

v. The data in the summary table shall be presented both as a hard copy and an electronic deliverable using the database format outlined in detail in the current HAZSITE application or appropriate spreadsheet format specified in the Department's electronic data interchange handbook in effect as of the date the report is prepared. The Electronic Data Interchange Handbook and a copy of the current HAZSITE application software may be obtained from the Department by calling 609–633–1476. If the summary table is prepared as part of the remediation of a specific discharge event, electronic deliverables are not required.

4. Stratigraphic logs, which include soil/rock physical characteristics and field instrument readings detected during drilling for each soil boring, test pit and monitoring well;

5. Stratigraphic cross sections of the site using information from monitoring wells, test pits and borings, if available;

6. All soil boring, piezometer, and monitoring well records, including the State permit numbers and as–built specifications, if applicable;

7. The following information shall be reported for each monitoring well sampled for each ground water sampling event. All measurements shall be to the nearest 0.01 feet:

i. Before purging:

(1) The date, time, and weather conditions;

(2) The well identification number and State well permit number;

(3) The photoionization detector (PID) and/or flame ionization detector (FID) reading taken from the well immediately after the cap is removed;

(4) The thickness of free product, if present, as determined pursuant to N.J.A.C. 7:26E–2.1(a)11;

(5) pH, dissolved oxygen, temperature, and specific conductance;

(6) The total depth of the well from the top of casing or surveyors mark if present;

(7) The depth from the top of the casing to the top of the screen;

(8) The depth from the top of the casing to the water; and

(9) The estimated water volume in the well.

ii. After purging:

(1) The start and end time for purging;

(2) The purge method;

(3) The purge rate(s);

(4) The total volume purged;

(5) The depth from the top of the casing to the water after purging; and

(6) pH, dissolved oxygen, temperature, and specific conductance.

iii. Before sampling:

(1) The depth from the top of the casing to the water before sampling.

iv. After sampling:

(1) The start and end time for sampling;

(2) pH, dissolved oxygen, temperature, and specific conductance; and

(3) The sampling method.

v. Any comments concerning field observations during the ground water sampling event, such as slow recharge, turbidity, odor, sheen, PID and/or FID readings, model number and ionization potential of PID and/or FID used, shall also be reported; and

8. Any other data and information obtained pursuant to N.J.A.C. 7:26E–3.3 through 3.12.

(d) The site investigation report shall also include the following legible maps and diagrams:

1. Site and area of concern base maps pursuant to N.J.A.C. 7:26E–3.2(a)3i;

2. Sample location map(s), including:

i. All sample locations, sample depths and contaminant concentrations shall also be plotted on the map. Where an entire contaminant class is not detected or is less than the applicable remediation standard, contaminants need not be listed individually;

ii. Map scale and orientation;

iii. Field identification numbers for all samples; and

iv. If more than one map is submitted, maps shall be presented as overlays, keyed to the base map in (d)1 above; sample locations may be superimposed on the site or area of concern map in (d)1 above. Alternatively, individual maps may be submitted which have a common coordinate system and common scale, provided each map details the features of the base map in (d)1, above;

3. If applicable, a map of the distribution of surface water, structure and airborne contaminants, including sample location numbers and contaminant concentrations; and

4. Photos may be submitted to document the location of all soil and sediment sample locations.

Recodified from 7:26E–3.10 and 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 (a), amended N.J.A.C. reference; in (b)4ii(4), substituted "remediation" for "action"; in (c)3, added "organized by area of concern"; added (c)3iv and v; inserted new (c)7; recodified former (c)7 as (c)8; and in (c)8, amended N.J.A.C. reference.

SUBCHAPTER 4. REMEDIAL INVESTIGATIONS

7:26E–4.1 Remedial investigation requirements

(a) A remedial investigation is necessary at each area of concern with contaminants which exceed the applicable unrestricted use remediation standards. The purposes of a remedial investigation are to:

TABLE 4–2
Summary of Target Contaminant Concentrations in Typical Historic Fill Material (mg/kg)

Contaminant (ppm)	Maximum	Average
Benzo(a)anthracene	160	1.37
Benzo(a)pyrene	120	1.89
Benzo(b)fluoranthene	110	1.91
Benzo(k)fluoranthene	93	1.79
Indeno(1,2,3-cd)pyrene	67	1.41
Dibenz(a,h)anthracene	25	1.24
Arsenic	1098	13.15
Beryllium	80	1.23
Cadmium	510	11.15
Lead	10700	574
Zinc	10900	575

Amended by R.1997 d.124, effective May 19, 1997 (operative July 18, 1997; 7:26E–4.6(a)2 operative November 19, 1997).
See: 28 N.J.R. 1098(a) 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).
Added "and historic fill" to section heading; in (a), substituted "ISRA" for "ECRA" and "as follows:" for "which may contain contaminants above the applicable remediation standards,"; recodified former (b) through (e) as (a)1 through 4; in (a)3, inserted reference to Geographic Information System and amended N.J.A.C. reference; in (a)4, substituted "responsible for conducting the remediation" for "responsible for the investigation"; and inserted new (b).

7:26E–4.7 Remedial investigation of ecological receptors

(a) If further ecological investigation is required pursuant to 7:26E–3.11(a)4, additional investigation shall be conducted during the remedial investigation to characterize the extent of contamination along contaminant migration pathways or within an environmentally sensitive area. Ecological investigations or risk assessments shall be conducted by a person experienced in the use of techniques and methodologies for conducting ecological risk assessments in accordance with EPA guidance. Ecological investigations shall be conducted in accordance with EPA guidance including, without limitation the following, incorporated herein by reference:

1. "Ecological Assessment of Hazardous Waste Sites: A Field and Laboratory Reference," EPA/60013–89/013;

2. "Risk Assessment Guidance for Superfund, Volume II, Environmental Evaluation Manual," EPA/540/1–89/001, and the associated supplementary guidance Ecological Update Series—Volumes 2 and 4; and

3. "Framework for Ecological Risk Assessment," EPA/630/R–92/001;

4. Eisler, R., "Contaminant Hazard Reviews," Fish and Wildlife Service, U.S. Department of Interior, various dates;

5. EPA, "Wildlife Exposure Factors Handbook," Vol. I and II, EPA 600/R–93/187a, b;

6. EPA, "BTAG Forum," Intermittent Bulletin published by USEPA, Office of Emergency and Remedial Response;

7. EPA, "ECO Update," Intermittent Bulletin published by USEPA, Office of Emergency and Remedial Response;

8. Opresko, D.M., B.E. Sample and G.W. Suter, "Toxicological Benchmarks for Wildlife: 1994," Oak Ridge National Laboratory, Oak Ridge, TN; and

9. Will, M.E. and G.W. Suter II, "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants: 1994 Revision," Oak Ridge National Laboratory, Oak Ridge, TN.

(b) A site specific ecological risk assessment report, in accordance with (a) above, shall be completed during the remedial investigation and shall be submitted as part of the remedial investigation report. The ecological risk assessment shall:

1. Determine actual impact or potential risks to identified environmentally sensitive areas;

2. Develop appropriate ecologically-based, site specific remediation standards for site contaminants, if applicable; and

3. Recommend measures for incorporation into the remedial action workplan, pursuant to N.J.A.C. 7:26E–6.2, to mitigate actual impact or ecological risks, if applicable.

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–4.8 Remedial investigation report

(a) The remedial investigation report shall comply with all requirements in N.J.A.C. 7:26E–3.13 (site investigation report) and in addition shall present and discuss any additional information collected pursuant to N.J.A.C. 7:26E–4.1 through 4.7 and the approved remedial investigation workplan as outlined in N.J.A.C. 7:26E–4.2, if applicable. The remedial investigation report shall be presented in a format that corresponds to the outline of this section.

(b) The remedial investigation report shall include the following:

1. Historical information pursuant to N.J.A.C. 7:26E–4.2(b)3;

2. Physical setting pursuant to N.J.A.C. 7:26E–4.2(b)4. In addition, if a well search was conducted, it shall be presented pursuant to Appendix B, incorporated herein by reference;

3. Technical overview pursuant to N.J.A.C. 7:26E–3.13(b)3 and, in addition, the following items shall be discussed:

i. A summary of the results of any treatability, bench scale, or pilot studies conducted to support remedy selection;

ii. A summary of the results of any data collected to develop permit limitations for any permits which may be required during potential remedial actions; and

iii. A summary of the results of any ecological assessments conducted; and

4. Findings/recommendations pursuant to N.J.A.C. 7:26E–3.13(b)4.

(c) The remedial investigation report shall include the following data and information:

1. Results of all analyses, copies of all laboratory data sheets and the required laboratory data deliverables pursuant to N.J.A.C. 7:26E–2.1 (Quality Assurance Requirements). Laboratory data deliverables may be submitted as a separate attachment;

2. A summary table of analytical methods and quality assurance indicators pursuant to N.J.A.C. 7:26E–2.2 (Quality Assurance Workplan);

3. Sampling Results Summary Table(s) of all analyses, including sample location, media, sample depth, and field and lab identification numbers pursuant to N.J.A.C. 7:26E–3.13(c)3 and, in addition:

i. All summary tables shall be organized by area of concern. For each area of concern, average concentrations for each contaminant shall be presented along with individual sample results if averaging will be used for compliance with applicable remediation standards.

(1) All contaminant concentrations exceeding the applicable remediation standard shall be identified; and

(2) Samples with MDLs (or PQLs if available) exceeding the applicable remediation standard shall be identified and an explanation provided in the table key; and

(3) If some contaminants are detected and quantified and some contaminants are "estimated" or non-detectable, for purposes of calculating the average, the person submitting the site investigation report shall substitute one half the reported method detection limit for all contaminants reported as non-detectable, and "estimated" values shall be included in the contaminant average "as is."

(4) "Non-detectable" values for contaminants in samples which have been diluted shall not be included in the area of concern average for those contaminants. "Detectable" values for contaminants in diluted samples shall be included in the area of concern average for those contaminants.

(5) The average shall be calculated for the contaminated area only, and shall not include clean zone data (data from outside the boundaries of the contaminated area as defined by samples contaminated greater than the applicable remediation standard). For example, if data points within a 50 foot "clean" buffer zone around an area of concern were identified during pre-remedial sampling, this clean zone shall not be included in the average. Samples from different depth intervals shall not be averaged together to determine compliance with applicable remediation standards.

(6) Post excavation sample data shall not be averaged for compliance with applicable remediation standards.

ii. The data in the Sampling Results summary table shall be presented pursuant to N.J.A.C. 7:26E–3.13(c)3.

4. Stratigraphic logs, which include soil/rock physical descriptions and field instrument readings detected during drilling for each soil boring, test pit and monitoring well, if applicable:

i. For fill material and historic fill material the logs shall include a description of fill type, any layering of the fill material, texture and size of materials, an assessment of fill homogeneity, field indicators of contamination including, without limitation, odors, staining or other discoloration, and field measurements of organic vapors using a calibrated PID/FID or other suitable instrument. The presence of any process waste including metal processing waste such as slag, tailings or free and/or residual product determined pursuant to N.J.A.C. 7:26E–2.1(a)11 shall be noted;

5. Stratigraphic cross sections of the site using information from monitoring wells, test pits and borings;

6. All soil boring, piezometer, and monitoring well records, including the State permit numbers and as-built specifications, if applicable;

7. For each monitoring well sampled, the information required pursuant to N.J.A.C. 7:26E–3.13(c)7 shall be reported for each ground water sampling event.

8. If applicable, ground water elevation, for each monitoring well, to the nearest hundredth (0.01) foot relative to a permanent, on-site datum taken prior to evacuation, from the top of well casing with locking cap removed;

9. A summary of the review of inventory control records to identify product loss and any actions taken to investigate potential discharge areas;

10. Results of any treatability, bench scale, or pilot studies or other data collected to support remedy selection;

11. Any data collected to develop permit limitations;

12. The results of any ecological assessments or evaluations conducted, including, without limitation, characterization of natural resource injuries. This information shall be submitted in a format compatible with the Department's Geographic Information System (see N.J.A.C. 7:1 Appendix A);

13. For landfills, a summary of any records pertaining to the nature of waste disposed at the landfill. Copies of the records shall be submitted as a separate attachment to the report;

14. For historic fill material, the following documentation shall be submitted:

i. A statement that, based on diligent inquiry of the history of the parcel of land, including use of the Department's Geographic Information System, the fill material is non-indigenous material, was used to replace soil in an area or raise the topographic elevation of the site, was contaminated prior to emplacement, and was in no way connected with the operations at the location of emplacement; and

ii. A statement that, based on the results of the remedial investigation, the 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; and

15. Any other data and information obtained pursuant to N.J.A.C. 7:26E–4.1 through 4.7.

(d) The remedial investigation report shall include the following legible maps and diagrams:

1. Site and area of concern base maps pursuant to N.J.A.C. 7:26E–4.2(b)3i. If more than one map is submitted pursuant to (d)2 below, maps shall be presented as overlays, keyed to the base maps. Sample locations may be superimposed on the base maps.

2. Sample location map(s), including:

i. All ground water, soil, sediments and other sample locations; sample depth and contaminant concentration shall also be plotted on the map;

ii. Map scale and orientation;

iii. Field identification numbers for all samples;

iv. Ground water elevation contour maps with flow direction specified for each set of static water level measurements for each aquifer if monitoring wells were installed for flow direction;

v. Top of bedrock contour map if bedrock was encountered in a sufficient number of borings to prepare a map;

vi. Isopleth maps for ground water contaminant concentrations for each round of sampling; isopleth maps for soil sample results may also be provided;

vii. Maps depicting the horizontal and vertical extent of any free and/or residual product zones in ground water or soil, as determined pursuant to N.J.A.C. 7:26E–2.1(a)11, for each round of sampling;

viii. If data for more than 25 samples are presented for an area of concern, soil, ground water and sediment contaminant isopleth maps and cross section diagram(s) showing concentrations of potential contaminants shall be submitted, including:

(1) Horizontal and vertical distribution of contaminants in the soil and sediment, with sample point location numbers and contaminant concentrations; and

(2) Horizontal and vertical distribution of contaminants in the ground water, with sample point location numbers and contaminant concentrations; and

ix. All monitoring well, piezometer, or other ground water sampling point locations including depth of the open borehole interval and/or screened interval;

3. If applicable, map of the distribution of surface water, structure and airborne contaminants, including sample location numbers and contaminant concentrations;

4. The same alpha or numeric labels, if assigned in the remedial investigation workplan, shall be used in the remedial investigation report; and

5. Photos may be submitted to document the location of all soil and sediment sample locations.

Recodified from 7:26E–4.9 and amended by R.1997 d.124, effective May 19, 1997 (operative July 18, 1997; 7:26E–4.8(c)14i operative November 19, 1997).
See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).
N.J.A.C. references amended throughout section; substantially amended (c)3i; added (c)3i(6); substantially amended (c)3ii; added (c)4i; rewrote (c)7; in (c)12, inserted reference to evaluations and added second sentence; inserted new (c)14; recodified former (c)14 as (c)15; inserted new (d)2vii; recodified former (d)vii and viii as (d)viii and ix; and deleted Tables 4–2 through 4–3a, providing database information. Former section "Remedial investigation workplan" was repealed.

7:26E–4.9 (Reserved)

Recodified to 7:26E–4.8 and amended by R.1997 d.124, effective May 19, 1997 (operative July 18, 1997).

SUBCHAPTER 5. REMEDIAL ACTION SELECTION

7:26E–5.1 Remedial action selection

(a) The purpose of remedial action selection is to select, develop and implement the most appropriate remedial action for a particular contaminated site or area of concern being investigated pursuant to N.J.A.C. 7:26E–3 and 4. A flow chart describing the remedial action selection process is set forth in the Appendix to this subchapter.

(b) A person selecting a remedial action shall first establish the remedial action objectives/goals for the site or area of concern by:

1. Identifying all media of concern;

2. Selecting applicable remediation standards based on the current and future land use for the site;

3. For each media of concern, selecting between active treatment versus containment and exposure controls; and

4. For each media of concern, selecting between a permanent and non-permanent remedial action.

(c) A person responsible for conducting a remediation for a site shall select a remedial action that reduces or eliminates exposure to contaminants above the applicable remediation standard. In determining the appropriate remedial action that will reduce or eliminate exposure to contaminants above the applicable remediation standard, the person responsible for conducting the remediation shall select, develop and implement a remedial action that is based on the following factors:

1. The ability of the remedial action to protect the public health and safety and the environment, including:

i. The technical performance and effectiveness of the remedial action in attaining compliance with the applicable remediation standards;

ii. The reliability of the remedial action in maintaining compliance with the applicable remediation standards;

iii. The degree to which the proposed remedial action reduces toxicity, mobility, or volume of contaminants through treatment, reuse or recycling; and

iv. The degree to which the remedial action minimizes risks and short-term impacts associated with the implementation of the remedy and with any contamination left on-site, while still providing long-term protection;

2. The implementability of the proposed remedial action, including:

i. The engineering and scientific feasibility and availability of the technologies that the proposed remedial action would employ. If treatability, bench scale, or pilot studies have been conducted pursuant to N.J.A.C. 7:26E–4.1(a)4, these results shall be utilized to determine whether or not the proposed remedial action is technically feasible; and

ii. The ability of the person responsible for conducting the remediation to implement the proposed remedial action within a reasonable time frame. A proposed remedial action will be considered timely if it will achieve the applicable remediation standard within five years from the time the remedy is implemented, or in the case where Department approval of a remedial action workplan is required or sought, five years from remedial action workplan approval. Remedial actions to address immediate environmental concerns shall be considered timely as specified by the Department in an oversight document pursuant to N.J.A.C. 7:26C;

3. The consistency of the proposed remedial action with other applicable Federal, State and local laws and regulations, including, without limitation, the provisions of the Pinelands Protection Act, P.L. 1979, c.111 (N.J.A.C. 13:18A–1 et seq.), any rules promulgated pursuant thereto, and the provisions of section 502 of the National Parks and Recreation Act of 1978, 16 U.S.C. § 4711;

4. The potential impacts of the proposed remedial action on the local community, including, without limitation:

i. The potential impacts to the community identified by the responses that the person responsible for conducting the remediation receives from the notice provided to the local government in accordance with N.J.A.C. 7:26E–1.4(a); and

ii. The degree to which the proposed remedial action is consistent with the local land use Master Plan;

5. The degree of permanence of the remedial action; and

6. The potential natural resource injury.

(d) A person responsible for conducting the remediation may select a non-permanent remedial action for soil contamination when the following criteria are satisfied:

1. For non-permanent remedial actions, excluding non-permanent remedial actions for historic fill sites, that require the use of engineering controls in addition to institutional controls, the cost of the lowest cost permanent remedial action for soil contamination shall be greater than two times the cost of the proposed non-permanent remedial action for soil contamination, except as provided in (d)2 below;

2. For non-permanent remedial actions, excluding non-permanent remedial actions for historic fill sites, that will only require institutional controls to maintain restricted uses of the site, if the difference in cost between treatment/removal of contaminated soils to restricted use standards and treatment/removal of contaminated soils to unrestricted use standards is within 10 percent of the cost to treat/remove contaminated soil to the restricted use standard, then the person responsible for conducting the remediation shall treat/remove the contamination down to the unrestricted use soil remediation standard;

3. Access and/or exposure to the site or area of concern that remains contaminated above the applicable remediation standard can be properly controlled and the current and future use of the site is consistent with all required engineering and/or institutional controls. Engineering and/or institutional controls shall be maintained as long as contamination remains above the applicable remediation standard. Engineering and/or institutional controls shall be appropriate to the degree of risk presented by the contamination left on-site and must be approved by the Department. In evaluating the protectiveness and effectiveness of engineering and/or institutional controls, the Department shall consider specific site conditions, including, but not limited to: the concentration of contaminants, the mobility of the contaminants, toxicity of the contaminants, surrounding land uses, potential future land uses on-site, and the presence of free and/or residual product, off-spec or discarded product or by-product from a manufacturing or industrial process or containerized wastes. Engineering controls may include, without limitation, fencing, capping ground water monitoring systems, ground water contaminant systems, including without limitation slurry walls and ground water pumping systems, and posted warnings of hazardous conditions;

4. The owner or transferee of the contaminated property shall agree, in writing, to the implementation of the non-permanent remedial action and all requirements for engineering and/or institutional controls. This agreement shall be documented by the owner or transferee's acceptance signature on the Declaration of Environmental Restrictions or other similar document approved by the Department;

5. The selected non-permanent remedial action shall be protective of human health and the environment for all environmental media including, but not limited to, soils, ground water and surface water; and

6. The potential for off-site migration of contamination through erosion, subsurface migration or other migration pathways shall be mitigated or eliminated.

(e) Nothing in this subchapter shall be construed to limit the requirements to conduct a feasibility study pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. §§ 9601 et seq.) or a corrective measures study pursuant to the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.).

7:26E–5.2 Remedial action selection report

(a) The person responsible for conducting the remediation shall demonstrate to the Department that the proposed remedial action is appropriate by submitting a remedial action selection report to the Department for approval, prior to implementation of the remedial action, when:

1. The selected remedial action is a non-permanent remedial action, except for the following:

i. Non-permanent remedial actions where the only medium of concern is soil and the proposed non-permanent remedial action will achieve the restricted use soil remediation standard in less than five years from the time the remedial action is implemented and not require use of engineering controls; or

ii. Interim response actions immediately necessary to contain or stabilize a discharge in order to prevent damage to public health, safety or the environment;

2. The selected remedial action will take longer than five years to complete from the time the remedial action is implemented, or the remedial action workplan is approved by the Department; or

3. The selected remedial action is being implemented to address ground water, surface water or sediment contamination or ecological impact.

(b) A remedial action selection report is not required if the site being remediated is subject to the requirements for preparing a feasibility study pursuant to CERCLA or a corrective measures study pursuant to RCRA.

(c) The remedial action selection report shall be presented in a format that corresponds to the outline of this section and shall include:

1. A detailed description of the selected remedial action including, without limitation, specifications for caps or fencing;

2. A list of the remediation standards that the proposed remedial action will comply with for each media of concern at each area(s) of concern;

3. A discussion of how the proposed remedial action satisfies all of the criteria pursuant to N.J.A.C. 7:26E–5.1(c) and (d);

4. All applicable cost analyses if a non-permanent remedial action for soil contamination is selected excluding non-permanent remedial actions for historic fill material. The cost analysis shall contain:

i. A remedial action cost estimate for the proposed non-permanent remedial action;

ii. A remedial action cost estimate for the lowest cost permanent remedial action applicable for the site and a detailed description of the permanent remedial action;

iii. An estimate of the excess cost of remediation of soils to the unrestricted use soil standards pursuant to N.J.A.C. 7:26E–5.1(d)2, if applicable;

iv. An estimate of any costs which may be incurred due to residual contamination or the implementation of the proposed remedial action including, but not limited to, natural resource damages; and

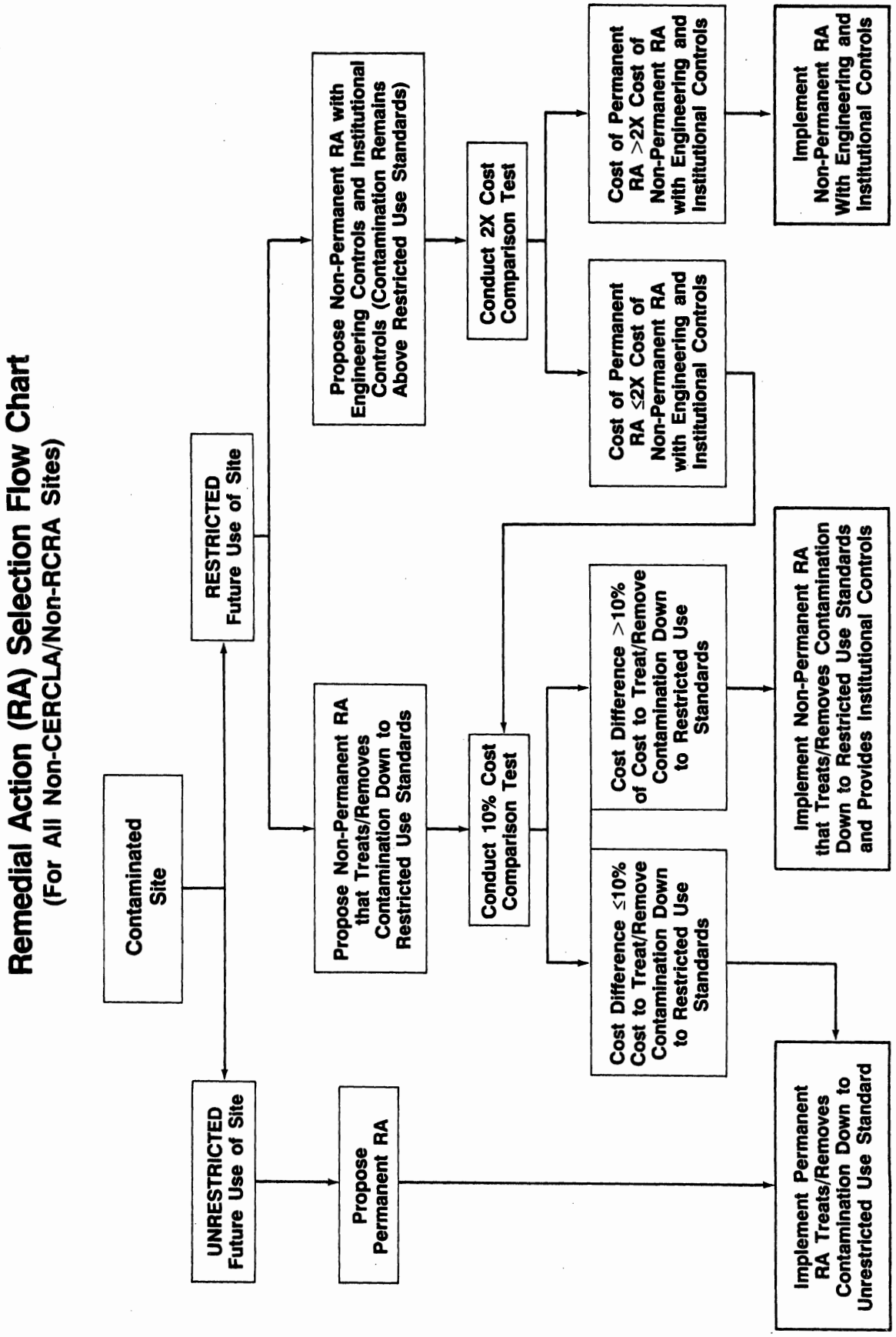
v. A cost comparison that meets the criteria in N.J.A.C. 7:26E–5.1(d)1 and/or 2, as appropriate; and

5. The Department may require the submittal of any additional information regarding remedial action selection which is necessary for the Department to determine if the remedy is appropriate.

(d) Where Department pre-approval of a remedial action workplan is required pursuant to N.J.A.C. 7:26E–6.1(b), or sought, the remedial action selection report should be submitted in conjunction with the final remedial investigation report, N.J.A.C. 7:26E–4.8. If the remedial action selection report is not submitted with the final remedial investigation report, the remedial action selection report shall be submitted with the remedial action workplan, N.J.A.C. 7:26E–6.2.

(e) Where Department pre-approval of a remedial action workplan is not required or sought, the remedial action selection report shall be submitted with the remedial action report, N.J.A.C. 7:26E–6.6.

APPENDIX


Remedial Action (RA) Selection Flow Chart
(For All Non-CERCLA/Non-RCRA Sites)
Contaminated Site
UNRESTRICTED Future Use of Site
RESTRICTED Future Use of Site
Propose Permanent RA
Propose Non-Permanent RA that Treats/Removes Contamination Down to Restricted Use Standards
Propose Non-Permanent RA with Engineering Controls and Institutional Controls (Contamination Remains Above Restricted Use Standards)
Conduct 10% Cost Comparison Test
Conduct 2X Cost Comparison Test
Cost Difference ≤10% Cost to Treat/Remove Contamination Down to Restricted Use Standards
Cost Difference >10% of Cost to Treat/Remove Contamination Down to Restricted Use Standards
Cost of Permanent RA ≤2X Cost of Non-Permanent RA with Engineering and Institutional Controls
Cost of Permanent RA >2X Cost of Non-Permanent RA with Engineering and Institutional Controls
Implement Permanent RA Treats/Removes Contamination Down to Unrestricted Use Standard
Implement Non-Permanent RA that Treats/Removes Contamination Down to Restricted Use Standards and Provides Institutional Controls
Implement Non-Permanent RA With Engineering and Institutional Controls

SUBCHAPTER 6. REMEDIAL ACTION

7:26E–6.1 Remedial action requirements

(a) The person responsible for conducting the remedial action shall notify the Department and the local governing body pursuant to N.J.A.C. 7:26E–1.4.

(b) Each remedial action implemented at a contaminated site shall:

1. Be approved by the Department prior to implementation, if a remedial action selection report is also required pursuant to N.J.A.C. 7:26E–5.2(a);

2. Comply with all applicable remediation standards in effect at the time the remedial action workplan is approved by the Department, provided, however, that if the applicable numeric remediation standards decrease by an order of magnitude or more prior to the issuance of a No Further Action Letter for the area of concern or the site, the person responsible for conducting the remediation shall be responsible for any additional necessary remediation to achieve the new remediation standards;

3. Comply with all applicable Federal, State, and local laws, regulations, and requirements;

4. Not in itself cause an uncontrolled or unpermitted discharge or transfer of contaminants from one media to another; and

5. Be reevaluated, as determined as necessary by the Department, if contaminants remain onsite after the remediation in excess of the applicable remediation standards. The reevaluation shall be conducted, at a frequency to be determined by the Department, by the person responsible for the remediation. The reevaluation shall determine, at a minimum, the continued adequacy of the chosen remedy, including the implemented institutional controls. Monitoring and performance requirements for engineering and institutional controls are as follows:

i. An owner or lessee of a site, or any person operating a business on a site at which engineering and institutional controls have been implemented as the remedial action shall:

(1) Maintain all engineering and institutional controls;

(2) Conduct periodic inspections of the engineering and institutional controls to determine that the engineering and institutional controls are operating as designed and intended in the Department approved remedial action workplan;

(3) Conduct periodic inspections of the engineering controls to determine the integrity, operability, and effectiveness of the engineering controls;

(4) Conduct periodic inspections of the institutional controls to determine that the land use of the property does not violate any use restriction delineated in the institutional control; and

(5) Submit reports to the Department documenting compliance with (b)5i(1) above which include:

(A) Identification of the Site including the name of the person responsible for conducting the remediation, name and the Known Contaminated Site List number for the site, street address and tax block and lot number of the site, and the name of the municipality and county where the site is located;

(B) Description of how the engineering controls have been maintained and evaluated since the last inspection was conducted and report pursuant to this section was submitted to the Department;

(C) The results of both the inspection and maintenance of the engineering controls and the evaluation of the effectiveness of the engineering controls; and

(D) Any recommendation regarding the engineering controls.

ii. An owner, or lessee of a site, or any person operating a business on a site at which engineering and institutional controls have been implemented as a remedial action shall submit a recommendation for additional remediation, if the results of the inspection and evaluation required in (b)5i(4) above, show that the engineering controls are not operating as designed and intended in the Department approved remedial action workplan.

(c) Single phase remediations, where the remedial action is conducted concurrently with sampling to delineate the contamination and to confirm contaminant removal, are acceptable.

(d) Free and/or residual product determined to be present pursuant to N.J.A.C. 7:26E–2.1(a)11 shall be treated or removed when practicable, or contained when treatment or removal are not practicable. Likewise, natural ground water remediation for dissolved phase contamination may be implemented if it is determined by the Department that active ground water remediation for the dissolved phase is impracticable or not cost-effective. Decisions regarding the practicability of a remedial decision shall be made by the Department on a case by case basis. Natural remediation of free and/or residual product will not be allowed.

(e) Institutional controls shall be required whenever a non-permanent remedy is used to remediate a site.

(f) The person responsible for conducting the remediation of historic fill material shall do so pursuant to N.J.A.C. 7:26E–6.2(c). Remedies for any other fill material, not meeting the definition of historic fill material, shall be selected pursuant to N.J.A.C. 7:26E–5.1.

(g) If ground water contamination above the applicable remediation standard is confirmed to have been caused by an onsite discharge and is not from natural or offsite sources, the Department shall determine the need to establish a Classification Exception Area for the impacted area of the aquifer pursuant to N.J.A.C. 7:9–6.6, the Ground Water Quality Standards, after evaluation of the information required at N.J.A.C. 7:26E–6.2(a)17. The Classification Exception Area is the area of the aquifer that is currently and is anticipated to be impacted above the applicable Ground Water Quality Standard pursuant to N.J.A.C. 7:9–6. The Classification Exception Area shall remain in effect until the person responsible for conducting the remediation documents that contaminant concentrations have decreased to the applicable ground water quality standard.

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 (a), inserted reference to notifying local governing body; in (b)1, substituted "if a remedial action selection report is also required pursuant to criteria in N.J.A.C. 7:26E–5.2(a)" for "unless the remedial action is a permanent remedy pursuant to N.J.A.C. 7:26E–5.1(c)"; in (b)2, added "in effect at the time ... new remediation standards"; rewrote (b)5; and added (d) through (g).
Amended by R.1997 d.499, effective November 17, 1997.
See: 29 N.J.R. 46(a), 29 N.J.R. 4957(a).
Added (b)5i and (b)5ii.

7:26E–6.2 Remedial action workplan

(a) If a remedial action workplan is required by the Department in an oversight document or pursuant to the ISRA or UST programs, or if the person responsible for conducting the remediation elects to obtain Department Preapproval for the workplan, the workplan shall be submitted in accordance with the schedule contained in that document, if applicable, and shall be presented in a format that corresponds directly to the outline of this section. The workplan shall include:

1. The remedial investigation report, pursuant to N.J.A.C. 7:26E–4.8, shall be presented as the first section of the remedial action workplan. If the remedial investigation report was previously submitted to the Department, either a summary of the report or a copy of the findings/recommendation section of the report may be submitted;

2. A sampling summary table for post remediation samples pursuant to N.J.A.C. 7:26E–4.2 (remedial investigation workplan).

3. A proposal to complete all requirements in N.J.A.C. 7:26E–6;

4. The identification of all applicable remediation standards;

5. A detailed description of the remedial action and the remedial technology to be conducted for each area of concern;

6. The identification of all areas where remedial action will be conducted on a scaled site map pursuant to N.J.A.C. 7:26E–4.8 (remedial investigation report). In addition, the map shall specify:

i. The location of remedial treatment units;

ii. The volume of each environmental medium to be remediated;

iii. The vertical and horizontal extent of area to be remediated;

iv. The location, depth and concentration of all contaminants in excess of the remediation standard; and

v. Sample locations, depths and parameters for all post-construction samples;

7. A quality assurance project plan including proposed sampling and analytical methods pursuant to N.J.A.C. 7:26E–2.2;

8. A list of all required permits;

9. If any construction activity is planned, the following items shall be provided in the workplan:

i. The location of any such construction facilities with additional details describing construction design;

ii. All applicable requirements and standards relating to construction for onsite remedial units including inspection and professional engineer certification.

10. A description of soil and sediment erosion control and monitoring, and dust and odor control and monitoring procedures to be implemented during remedial activities, if applicable;

11. A health and safety plan pursuant to N.J.A.C. 7:26E–1.9;

12. A detailed description of site restoration plans to comply with N.J.A.C. 7:26E–6.4 (post-remediation action requirements);

13. A description of procedures for dismantling and removal of remedial structures and equipment from the site, if applicable;

14. A cost estimate of the remedial action pursuant to N.J.A.C. 7:26E–5.2;

15. If remedial actions will exceed three months in duration, refer to N.J.A.C. 7:26E–6.5 (remedial action schedule and progress reports) for specific schedule and progress report requirements. A schedule is not required if the remedial action will not exceed three months from the proposed start date; however, the proposed completion date of the remedial action shall be provided;

16. A draft declaration of environmental restrictions, or other similar document approved by the Department, and written approval from the owner of the property where the declaration of environmental restrictions will be placed, if the person responsible for conducting the remediation chooses to implement an institutional control at a site in lieu of remediating the site to meet an applicable unrestricted use remediation standard;

17. If a Classification Exception Area is to be established because groundwater contamination above the approved remediation is confirmed to have been caused by an onsite discharge and is not from natural or offsite sources, the person responsible for conducting the remediation shall submit the following information to the Department:

i. A description of the fate of the contaminant plume, detailing the horizontal and vertical distance and length of time the plume is expected to travel and persist before contaminant concentrations decrease to or below the applicable standards. The most mobile and persistent contaminants present above their respective ground water quality criteria shall be used when performing this evaluation;

ii. A proposed expiration date for the Classification Exception Area;

iii. A map of the proposed area of the Classification Exception Area, compatible with the Department's Geographic Information System (see N.J.A.C. 7:1 Appendix A), both as a paper hard copy and electronically by means of computer disk;

iv. A determination as to whether the Classification Exception Area extends through a ground water use area. A ground water use area shall be determined based upon both the well search conducted pursuant to N.J.A.C. 7:26E–4.4(h)3v and an evaluation of the current and potential ground water uses of the area using a 25–year planning horizon. The evaluation shall include, without limitation, municipal and water purveyor planning data pertaining to the existence of water lines, proposed future installation of water lines, and local and/or county ordinances restricting installation of potable wells. The aquifer will be considered a water use area if any domestic, irrigation, industrial, or public supply wells, or wells with water allocation permits already exist or there is a reasonable expectation they will be installed within the 25–year planning horizon and within the proposed boundaries of the Classification Exception Area; and

v. Documentation that the person responsible for conducting the remediation has notified persons listed below of the intent to establish the Classification Exception Area. Notification shall be sent by certified mail, return receipt requested, and in accordance with N.J.A.C. 7:26E–1.4. The notifications shall describe the type and aerial extent of groundwater contamination, the proposed remedial action and its projected duration, and the limitation on groundwater use that will be necessary based on the contamination present and the proposed remedial action. Appropriate persons to be notified are as follows:

(1) The local health departments and clerks of the governing bodies of each municipality in which the Classification Exception Area is located; and

(2) In a groundwater use area as determined pursuant to N.J.A.C. 7:26E–6.2(a)17iv, all owners of properties under which the contaminant plume may flow and on which wells either already exist or there is a reasonable expectation to be installed; and

18. A description and schedule for the maintenance and evaluation pursuant to N.J.A.C. 7:26E–6.1(b)5 of all engineering and institutional controls.

(b) If contaminated soil will be reused at a site, an evaluation pursuant to N.J.A.C. 7:26E–6.4(d) shall be conducted and a soil reuse proposal shall be submitted to the Department as part of the remedial action workplan. The soil reuse proposal may also be submitted at any time during the remediation process, as appropriate. At a minimum, the soil reuse proposal shall include:

1. A description of the originating site or area of concern by the submission of a remedial investigation report or, as applicable, a remedial action report for the contaminated soil. If the reports were previously submitted to the Department, a summary of the report may be submitted;

2. A determination in accordance with N.J.A.C. 7:26–8.5 as to the waste classification of the soil, including any supporting data requested by the Department; and

3. A detailed description of the proposed reuse and conditions at the site of reuse including:

i. The location of the site including state, county, municipality, block and lot numbers;

ii. The volume of soil to be reused;

iii. Identification of the specific location on the site where the reuse will be conducted on a scaled maps pursuant to N.J.A.C. 7:26E–3.2(a)3i through iii;

iv. The depth to ground water on the receiving site, including the method of determination;

v. The receiving site use;

vi. A discussion of the performance, effectiveness and reliability of the proposed reuse and any potential negative impacts to human health, safety or the environmental as a result of the reuse; and

vii. All other applicable data and information required pursuant to (a)8 through 15.

(c) If historic fill material will not be treated or removed from the site, engineering and institutional controls shall be proposed in accordance with the Department's procedures in effect at the time of proposal, provided that the information is pursuant to N.J.A.C. 7:26E–4.8(c)14 and the following documentation is presented in the remedial action workplan:

1. A statement that all other areas of concern located in the historic fill material area have been addressed as separate areas of concern. Remedies for any such areas, not meeting the definition of historic fill material, shall be selected pursuant to N.J.A.C. 7:26E–5.1.

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 (a), substituted "ISRA" for "ECRA", inserted reference to electing to obtain Department pre-approval, and inserted ", if applicable," following "schedule contained in that document"; in (a)1, 2, and 6, amended N.J.A.C. references; in (a)1, inserted reference to copy of findings/recommendation section; in (a)2, inserted "for post remediation samples'; in (a)14, substituted "; however," for "and"; and added (a)16, (a)17, (b) and (c).
Amended by R.1997 d.499, effective November 17, 1997.
See: 29 N.J.R. 46(a), 29 N.J.R. 4957(a).
Added (a)18.

7:26E–6.3 Specific remedial action requirements

(a) As a first priority during remedial action, contaminants in all media shall be contained and/or stabilized to prevent contaminant exposure to receptors and to prevent further movement of contaminants through any pathway.

(b) The following requirements shall be followed for the closure of an underground storage tank:

1. The associated piping shall be drained and the tanks pumped out and cleaned thoroughly using the American Petroleum Institute's recommended Practice for the Abandonment or Removal of Used Underground Service Tanks, as amended and supplemented. Copies can be obtained from the American Petroleum Institute, 1220 L Street Northwest, Washington, DC 20005;

2. All of the openings in the tank shall be plugged except for one vent hole;

3. The soil around the tank shall be excavated and the tank shall be removed and secured;

4. After the tank is secured, it shall be examined for holes and the NJDEPE HOTLINE, (609) 292–7172, shall be called if any holes are found unless a discharge from the tank was previously reported to the Department;

5. The tank shall then be prepared for disposal by labeling the tank regarding its site of origin, ultimate destination site and the substance(s) that were stored in it during its use as a storage tank; and

6. The tank shall be removed from the site according to all applicable laws and regulations.

i. During tank removal, the following observations shall be made and documented:

(1) A description of tank condition (with photographic documentation);

(2) The excavation floor and sidewalls shall be examined for any physical evidence of soil contamination;

(A) When tanks that contained volatile organics, including No. 2 fuel oil, diesel fuel, gasoline, kerosene, jet fuel, waste oil, are removed, the excavation floor and sidewalls shall be field screened with a properly calibrated flame ionization detector (FID), or photoionization detector (PID) along transects spaced no more than five feet apart.

(B) If the tank did not contain volatile organics (for example, No. 4, No. 6 fuel oil), the excavation shall be examined visually for evidence of a discharge.

(3) If there is no evidence of a discharge, soil samples for laboratory analysis shall be taken immediately after tank removal as follows:

(A) If there is no ground water in the excavation, center line soil samples are required at a frequency equal to the total length of the tank divided by five (minimum of one sample), provided that samples are spaced equidistantly and that the outermost samples obtained are no greater than 2.5 feet from each respective end of the tank. If the total length of a tank is not evenly divisible by five, one additional sample shall be obtained for any fraction remaining;

(B) If there is ground water in the excavation, soil samples shall be taken as follows:

(I) If potential contaminants have a specific gravity of one or less, independent of the number of tanks in the excavation, one sample shall be taken from the zero to six inch interval above the water table from each excavation sidewall for every 30 linear feet of sidewall (minimum of one sample per sidewall); except that, for no. 2 fuel oil or diesel oil tanks of 550 gallon capacity or less, one sample, biased to the suspected location of greatest contamination, shall be taken from one excavation sidewall at the zero to six inch interval above the water table;

(II) If potential contaminants have a specific gravity of more than one, samples shall be taken pursuant to (b)6i(3)(A) above; or

(III) If the tanks contained mixed substances such that some contaminants had a specific gravity of more than one and some contaminants had a specific gravity of less than one (for example no. 6 fuel, or waste oil potentially contaminated with chlorinated solvents), samples shall be taken below the water table pursuant to (b)6i(3)(A) above, and, independent of the number of tanks in the excavation, from the zero to six inch interval above the water table from each excavation sidewall for every 30 linear feet of sidewall (minimum of one sample per sidewall); and

(IV) Soil samples taken from below the water surface shall be taken using appropriate sediment sampling methods; and

(4) If there is evidence of a discharge and a soil remedial action will occur, refer to N.J.A.C. 7:26E–6.4. If there is evidence of a discharge, but there is insufficient soil to conduct a soil remedial action, (for example, tank is located in bedrock) or any portion of the tank is located within or immediately above the ground water table, a ground water sample shall be taken pursuant to N.J.A.C. 7:26E–3.7(c);

(5) If there is any evidence of ground water contamination, including without limitation, a sheen or odor, a ground water sample shall be collected pursuant to N.J.A.C. 7:26E–3.7; and

(6) A description of product type and quantity spilled from tank or tank system during excavation.

ii. The following requirements shall be followed for the abandonment in–place of a physically accessible underground storage tank. If contamination is detected above an applicable remediation standard and remedial action will occur, the tank system shall be removed to facilitate remedial action, if feasible. If it is not feasible to remove the tank system, a certification shall be submitted, signed and sealed by a licensed New Jersey professional engineer, stating why the removal is not feasible:

(1) The tank system and associated piping shall be drained and the system pumped out and cleaned thoroughly using American Petroleum Institute guidance applicable at the time of cleaning. Because vapors in the tank atmosphere will be displaced during the tank cleaning and abandonment operation, particular emphasis shall be placed on health and safety concerns;

(2) After the tank is cleaned, the tank shall be inspected and any areas of questionable integrity, including, without limitation, any cracks or corrosion, or evidence of discharge, shall be documented. Photographs may be submitted to document that the integrity of the system has been breached, if the evidence is clearly visible in the photograph;

(3) Upon completion of tank cleaning, soil sampling shall be conducted by completing borings through the bottom of the tank, along the center line, at a frequency equal to the total length of the tank divided by five (minimum of one sample), provided that the samples are spaced equidistantly and that the outermost samples obtained are no greater than 2.5 feet from each respective end of the tank. If the total length of a tank is not evenly divisible by five, one additional sample shall be obtained from any fraction remaining;

(3) Contaminant levels above the applicable remediation standard remain, but a decreasing trend of contaminant levels is demonstrated in, at a minimum, the area of concern monitoring well(s). The decreasing trend shall be demonstrated by applying the statistical Mann–Whitney U–Test to eight consecutive quarters of ground water sampling data. The test shall be applied to individual contaminants detected in each monitoring well pursuant to Appendix C; and

4. Ground water sample data shall not be averaged for the purpose of the Mann–Whitney U–Test.

5. Alternative non–parametric statistical tests may be proposed. The Department shall determine the acceptability of such tests on a case by case basis.

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), substituted "closure" for "removal", added (b)6i(3)(A) and (B); rewrote (b)6i(4); inserted new (b)6i(5); recodified former (b)6i(5) as (b)6i(6); rewrote (b)ii; and added (b)6iii through v, (c), (d) and (e).

7:26E–6.4 Post remedial action requirements

(a) The following sampling shall document the effectiveness of the remedial action:

1. All sampling shall be conducted pursuant to N.J.A.C. 7:26E–3.3 through 3.12 and 4.1 through 4.7.

2. For soils, if excavation is conducted, the minimum post remediation sampling frequency shall be:

i. For excavations less than 20 feet in perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.

ii. For excavations 20 to 300 feet in perimeter:

(1) For surface spills, one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

(2) For subsurface spills, one sample from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

iii. For larger excavations, sampling frequency may be reduced if documentation acceptable to the Department is provided in the remedial action report (N.J.A.C. 7:26E–6.6) specifying why the sample frequency was considered adequate.

iv. For volatile organics bottom samples taken within 24 hours of excavation, samples shall be taken from the zero to six inch interval at the excavation floor. Samples taken after 24 hours shall be taken at six to 12 inches. For excavations open longer than two weeks, volatile organics sample depth for bottom samples shall be in accordance with N.J.A.C. 7:26E–3.6(a)4 (site investigation requirements).

v. Each excavation within a larger excavation shall be considered a separate excavation and shall comply with (a)2i through iv above.

vi. For tanks, if contaminated soil is removed, post remediation soil samples for laboratory analysis shall be taken immediately after contaminated soil removal pursuant to N.J.A.C. 7:26E–6.3(b)6i(3). If the excavation is enlarged horizontally beyond the immediate tank removal area, additional soil samples shall be taken pursuant to (a)2i through iv above.

3. For soils, if in situ remediation is conducted, the minimum post-remediation sampling frequency shall be one sample per 900 square feet of contaminated area. Where the contaminated zone exceeds two feet in depth, one additional sample per 900 square feet of contaminated area shall be taken for each two feet of depth.

4. Post–remediation sample locations and depth shall be biased towards the areas and depths of highest contamination identified during previous sampling episodes unless field indicators such as field instrument measurements or visual contamination identified during the remedial action indicate that other locations and depths may be more heavily contaminated. In all cases, post–remediation samples shall be biased toward locations and depths of the highest expected contamination.

5. If the extent of contamination above the applicable unrestricted use remediation standard was estimated during the remedial investigation, the extent of contamination above the applicable unrestricted use remediation standard shall be confirmed using laboratory analysis prior to the completion of a remedial action or the execution of a Declaration of Environmental Restriction, or other similar document approved by the Department.

6. If a Classification Exception Area was established as part of the remedial action in a ground water use area, the person responsible for conducting the remediation shall collect two rounds of ground water samples from all monitoring wells that exhibited contamination above respective Ground Water Quality Standards within 120 calendar days after the established expiration of the Classification Exception Area to confirm the effectiveness of the remediation. The time between sampling events shall account for seasonal fluctuations in the ground water table. The ground water sampling results shall be submitted to the Department for review, along with recommendations regarding any additional actions required. The Classification Exception Area will remain in place until sampling results confirm that the contaminant concentrations have decreased to or below the applicable ground water quality standard.

(b) All areas subject to remediation shall be restored, to the extent practicable, to pre–remediation conditions with

respect to topography, hydrology and vegetation, unless alternate restoration is approved by the Department pursuant to N.J.A.C. 7:26E 1.6(d).

1. Sites located adjacent to or in wetlands or in or near other environmentally sensitive areas, may have further requirements under N.J.A.C. 7:7E (Coastal Zone Management) or N.J.A.C. 7:7A (Wetlands Act).

2. Fill material used to restore a site after the remediation has been completed shall be similar in physical properties to the material removed unless otherwise approved in advance by the Department. Fill used for new building foundations or other construction in remediated areas are exempt from this requirement.

i. If the excavated material is native soil, the fill shall be of equal or less permeability than the soil removed.

ii. If the excavated material is not native soil, the fill material shall be of equal or less permeability than the native soil in or adjacent to the area of concern or, at a minimum, have a permeability equal to or less than that of loam.

iii. Fill shall be uncontaminated pursuant to any applicable remediation standard and free of extraneous debris or solid waste.

iv. Documentation of the quality of the fill shall be provided by a certification stating that it is virgin material from a commercial or noncommercial source or decontaminated recycled soil.

v. Uncontaminated soil from the site pursuant to any applicable remediation standard may be returned to excavations or may be used elsewhere on the site.

vi. The bills of lading shall be provided to the Department to document the source(s) of fill. The documentation shall include:

(1) The name of the affiant and relationship to the source of the fill;

(2) The location where the fill was obtained, including the street, town, lot and block, county, and state, and a brief history of the site which is the source of the fill; and

3. A statement that to the best of the affiant's knowledge and belief the fill being provided is not contaminated pursuant to any applicable remediation standards and a description of the steps taken to confirm such.

(c) After completion of remediation all monitoring and extraction wells shall be sealed in accordance with N.J.A.C. 7:9–9 unless otherwise approved by the Department.

(d) If contaminated soils will be reused at a site, a soil reuse evaluation proposal shall be conducted and submitted to the Department prior to the reuse of contaminated soils and shall satisfy the following sampling requirements:

1. The contaminated soil intended for reuse shall be fully characterized and delineated pursuant to the site investigation, N.J.A.C. 7:26E–3, and remedial investigation, N.J.A.C. 7:26E–4, or, if the soil has not been fully characterized and delineated, the soil shall be sampled in accordance with all applicable requirements at N.J.A.C. 7:26E–1, 2, 3.4, and 3.6, at the following frequencies:

i. Field screening methods, if available pursuant to N.J.A.C. 7:26E–2.1(b), shall be used to determine sample locations. Each 20 cubic yards of soil shall be screened with borings or test pits throughout the depth of the soil pile, at two foot intervals. Two samples shall be collected for laboratory analysis for the first 100 cubic yards of excavated material and one sample for each additional 100 cubic yards; or

ii. If contamination is not detectable by field screening methods, samples shall be collected for laboratory analysis from mid–depth in the pile at a frequency of one sample per 20 cubic yards for the first 100 cubic yards of soil and one sample for each additional 100 cubic yards; and

iii. For quantities of soil greater than 1,000 cubic yards, a lower sampling frequency may be acceptable, subject to prior Departmental approval pursuant to N.J.A.C. 7:26E–1.6(d);

2. When soils are excavated to access underground storage tank systems or other subsurface structures and there is no evidence of a discharge pursuant to N.J.A.C. 7:26E–6.3(b), soil analysis of the excavated soil is not required prior to reuse. The results of post–remedial sampling required pursuant to N.J.A.C. 7:26E–6.3 shall be evaluated prior to reuse of the soils to confirm that no discharge occurred at the underground storage tank system; and

3. Excavated soil from drill cuttings or test pit excavations, may be returned to the original location provided that:

i. The activity was performed in accordance with the Subsurface and Percolating Waters Act, N.J.S.A. 58:4A–4.1;

ii. Neither free nor residual product is present, as determined pursuant to N.J.A.C. 7:26E–2.1(a)11;

iii. The contamination present shall be addressed as part of the remediation of the area of concern; and

iv. The replacement of the soil shall not pose any additional threat to public health, safety or the environment.

(e) Any person responsible for conducting remediation that implements a nonpermanent remedy must record a declaration of environmental restrictions with each county clerk of the county the site is located in and shall provide a copy of the filed declaration of environmental restrictions, with a copy to the Department, pursuant to N.J.A.C. 7:26E–1.4, to each local health department and each governing body of each municipality where the site being remediated is located.

(f) If the person responsible for conducting the remediation required for real property not owned by that person does not obtain the property owner's written consent to implement the institutional and/or engineering control at the property and to record a declaration of environmental restrictions, the person shall remediate the property to an applicable unrestricted soil remediation standard.

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 (a)1 and (a)2iv, amended N.J.A.C. references; in (a)2vi, substituted N.J.A.C. reference for specific sampling guidelines; deleted (a)4, relating to sampling frequencies for building interiors; recodified former (a)5 as (a)4; inserted new (a)5; added (a)6; in (b), inserted N.J.A.C. reference; in (b)1, substituted "environmentally sensitive areas" for "critical habitat areas as defined in N.J.A.C. 7:26D–5"; and added (d).
Amended by R.1997 d.499, effective November 17, 1997.
See: 29 N.J.R. 46(a), 29 N.J.R. 4957(a).
Added (e) and (f).

7:26E–6.5 Remedial action schedule and progress reports

(a) If the remedial action activities at a site are being performed pursuant to N.J.A.C. 7:26C or the ISRA or UST programs, and require more than three months for completion, a schedule for completion of the remedial action by task and final completion schedule is required in addition to progress reports at a frequency which shall be specified by the Department in the oversight document or by the ISRA or UST program. The remedial action schedule shall contain the following elements:

1. Schedules shall utilize monthly timeframes, when possible, for the initiation or completion of tasks;

2. The remedial action workplan shall not list specific dates as these will be contingent upon Department approval of the remedial action workplan;

3. After remedial action workplan approval is obtained, the schedule shall be revised to identify the projected month/year for each task;

4. All tasks for all areas of concern shall be identified in the schedule;

5. Contractor bidding/review/acceptance process timeframe shall be included in the schedule;

6. The schedule shall consider timeframes for permit applications (municipal, NJDEP, etc.) and final permit approvals. A critical path schedule shall be included when any permits are involved because certain tasks cannot proceed without permit approval;

7. When projecting dates for submission of reports to the Department, the schedule shall consider review time of not only the person preparing the report but all other persons who are deemed necessary to finalize the report;

8. The schedule shall identify all anticipated report submittals (month/year) to the Department including, without limitation, progress reports, ground water monitoring reports, post-remediation data reports for individual areas of concern, construction design reports and final remedial action reports. Laboratory analysis time shall be accounted for in projecting report submittal dates;

9. The schedule shall allow for Department review time of submitted reports;

10. The schedule shall include time for obtaining waste classification from the Department for disposal or treatment of waste material generated during remediation;

11. The schedule shall include a timeframe for site restoration (backfill, regrade, pave, etc.) and Department final inspection; and

12. The schedule shall include projected date for full compliance with the Department program overseeing the remediation.

(b) A progress report shall include, at a minimum, the following information:

1. Specification/reporting of all remedial actions accomplished during the reporting period;

2. Proposal of any deviations from and/or modifications to the approved remedial action workplan. All modifications shall be approved by the Department prior to enactment;

3. Reporting of problems or delays in the implementation of the remedial action workplan. Proposed corrections shall be presented with changes to the approved project schedule and shall be approved by the Department. A revised schedule shall be submitted as part of the progress report. The status of all permit applications shall be included in this schedule;

4. Identification of the remedial actions for the next reporting period;

5. Presentation annually of the actual costs of remediation incurred to date;

6. If required in an oversight document pursuant to N.J.A.C. 7:26C or by ISRA or UST, the following shall be provided:

i. Tabulation of all sample results received during this period pursuant to N.J.A.C. 7:26E–3.13(c)3 and submission of a report summarizing the data and presenting conclusions; and

ii. Tabulation of waste classification and/or characterization samples collected including the physical state of the material (solid, liquid, sludge), the volume of material, number of samples collected, analyses performed and results;

7. A listing of all types and quantities of waste generated by the remedial action during the reporting period and to date. Include the name of the disposal facilities, and transporters' dates of disposal, and if appropriate, the manifest numbers of each waste load; and

8. Any additional support documentation that is available (e.g. photographs) shall be submitted.

(c) If the Department determines in writing that oversight of some of the remedial activities will occur pursuant to Federal, State or local permits, then the requirements of this subchapter may be waived for those activities. The Department may request a summary of permitted activities.

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 (a) and (b)6, substituted "ISRA" for "ECRA"; in (a)6, substituted "NJDEP" for "NJDEPE"; and in (b)6i, substituted N.J.A.C. reference for specified items to be included in tabulation.

7:26E–6.6 Remedial action report

(a) Any remedial action report submitted to the Department for approval shall present and discuss all data and information collected in compliance with N.J.A.C. 7:26E–6.3 (specific remedial action requirements) and N.J.A.C. 7:26E–6.4 (specific post-remedial action requirements), if applicable. The report shall be presented in a format that corresponds directly to the outline of this section.

(b) Any remedial action report submitted to the Department for approval shall include the following:

1. All information contained in the remedial investigation report pursuant to N.J.A.C. 7:26E–4.8 or a summary of the report;

2. The remedial investigation report section entitled "Findings/ Recommendations," shall be renamed "Findings/Remedial Action Report" and shall include a description of how each area of concern was addressed; and

3. If not already required to be submitted with a remedial action workplan, a description and schedule for the maintenance and evaluation pursuant to N.J.A.C. 7:26E–6.1(b)5.

(c) The Findings/Remedial Action report section shall state for each area of concern either "no remediation was conducted for this area of concern" or "remedial actions were completed for this area of concern." Where remedial actions were completed, the following shall be included:

1. A summary by area of concern of all remedial actions completed;

2. A list of the remediation standards applied to the remedial actions;

3. Tables and figures pursuant to N.J.A.C. 7:26E–4.8 (remedial investigation report) containing all pre– and post–remedial data keyed appropriately so that completion of the remedial action is documented. The figures shall clearly indicate the volume of contaminated soil or sediment which was remediated:

4. A detailed description of site restoration activities pursuant to N.J.A.C. 7:26E–6.4 (Post-Remedial Action Requirements);

5. A detailed description of source and quality of fill pursuant to N.J.A.C. 7:26E–6.4;

6. A detailed report of actual costs pursuant to N.J.A.C. 7:26E–5.2;

7. "As-built" diagrams for any permanent structures including, without limitation, caps, slurry walls, treatment units, or other remedial structures which will remain in place after completion of the remedial action;

8. Fully executed manifests documenting any offsite transport of waste material; and

9. A copy of the declaration of environmental restrictions stamped recorded by the county clerk.

(d) For active ground water remedial actions, the remedial action report shall also include:

1. Figures representative of flow conditions immediately preceding initiation of the remedial action and flow conditions representative of pumping conditions; and

2. Graphs depicting changes in contaminant concentration over time for all contaminated non–pumping monitoring wells and all downgradient delineation monitoring wells.

(e) The remedial action report shall include any proposal for additional remediation pursuant to N.J.A.C. 7:26E–6.1(b)5 if the engineering controls are not operating as designed and intended in the Department approved remedial action workplan.

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)1 and (c)3, amended N.J.A.C. references; in (c)3, substituted "contaminated soil or sediment" for "contaminated media"; and added (d).
Amended by R.1997 d.499, effective November 17, 1997.
See: 29 N.J.R. 46(a), 29 N.J.R. 4957(a).
Inserted (b)3; rewrote (d)9; and added (e).

7:26E–6.7 Removal or modification of the declaration of environmental restrictions

(a) Any person that wishes to conduct additional remediation or other activities which may compromise the integrity of an engineering control shall obtain the Department's approval of the additional remediation or shall notify the Department of the implementation of activities other than remediation prior to implementation of those activities.

1. The person planning to conduct additional remediation shall submit to the Department a memorandum of agreement application, pursuant to N.J.A.C. 7:26C–3, for the Department's oversight of the additional remediation, if the person is not already subject to an oversight document for the property in question.

2. Subsequent to implementation of the Department approved additional remediation or other activities, the person shall submit to the Department for approval a remedial action report for the additional remediation or a report for the other activities and a request, pursuant to (b) through (c) below, to remove or modify, as appropriate, the declaration of environmental restrictions.

(b) A person who owns property which is subject to a declaration of environmental restrictions shall submit a written request to the Department, along with the memorandum of agreement application, pursuant to (a) above, as applicable, at the address provided at N.J.A.C. 7:26C–1.6, to remove or modify the declaration of environmental restrictions recorded pursuant to this subchapter. The written request shall include a copy of the existing declaration of environmental restrictions stamped filed and the reason for the removal or modification including, but not limited to:

1. The existing declaration of environmental restrictions should be modified or is no longer required due to the following:

i. The performance of subsequent remediation necessitates the modification or removal of the declaration of environmental restrictions;

ii. A change in conditions at the site warrants the removal or modification of the declaration of environmental restrictions; or

iii. The adoption of revised remediation standards warrants the removal or modification of the declaration of environmental restrictions; and

2. Any additional information or documentation that supports the person's request for removal or modification of the declaration of environmental restrictions.

(c) The Department shall evaluate the request submitted pursuant to (b) above and within 90 calendar days after the Department's receipt of the written request either:

1. Approve the request and send written notification requiring the property owner to:

i. Record with the office of each county recording officer a notice executed by the Department that the use of the property is no longer restricted and the declaration of environmental restrictions is terminated or record a modified declaration of environmental restrictions delineating the new restrictions; and

ii. Provide written notice to each municipality in which the property is located, with a copy to the Department sent to the address provided at N.J.A.C. 7:26C–1.6, of the removal or change of the restrictive use conditions; or

2. Issue a written notification of intent to deny the request.

(d) Within 30 calendar days after receipt of the Department's written notification of intent to deny, the property owner may respond by submitting new or additional information to support the request. Within 60 calendar days after receipt of the property owner's response the Department shall issue its written decision which may be considered final agency action.

New Rule, R.1997 d.499, effective November 17, 1997.
See: 29 N.J.R. 46(a), 29 N.J.R. 4957(a).

SUBCHAPTER 7. PERMIT IDENTIFICATION AND APPLICATION SCHEDULE

7:26E–7.1 Permit identification

(a) Any person conducting a remedial action shall identify all relevant Federal, State and local permits or permit modifications or certifications needed to implement the selected remedial action including but not limited to:

1. Soil Erosion and Sediment Control Plan Certification for Land Disturbance Control (N.J.A.C. 2:90);

2. Permit to Construct/Install/Alter Air Quality Control Apparatus/Equipment (N.J.A.C. 7:27–8);

3. Certificate to Operate Air Quality Control Apparatus/Equipment (N.J.A.C. 7:27–8);

4. Coastal Area Facility Review Act (CAFRA) Permit (N.J.S.A. 13:19–1 et seq.);

5. Waterfront Development/Upland Waterfront Permit (N.J.S.A. 12:5–3);

6. Wetlands Permit (N.J.S.A. 13:9A–1 et seq.);

7. Freshwater Wetlands/Open Water Fill Permit (N.J.S.A. 13:98–1 et seq.);

8. Stream Encroachment Permit (Construction Within a Flood Plain) (N.J.S.A. 58:16A–50 et seq.; N.J.A.C. 7:8–3.15);

9. State Water Quality Certificate (N.J.S.A. 58:10A–1 to 13; 33 U.S.C. 1251, § 401);

10. Dewatering Permit and/or Water Diversion Permit (N.J.S.A. 23:5–29);

11. U.S. Army Corps of Engineers Dredge and Fill Permit;

E. Spike Sample Results Summary——A summary of the spike sample analysis shall be submitted. The following information shall be reported: ID number of the sample chosen for spiking, sample matrix, the concentration of each spiked target analyte, the results of the unspiked sample analysis, the results of the spiked sample analysis, the percent recovery for each spiked analyte and the QC limit for percent recovery for each spiked analyte.

F. Duplicate Sample Results Summary——A summary of the duplicate sample analysis shall be submitted. The following information shall be reported: ID number of the original sample and the duplicate samples, sample matrix, results of the original sample analysis, results of the duplicate sample analysis, the relative percent difference of each target analyte for the original duplicate sample analyses and the QC limit for relative percent difference for each target analyte.

G. Laboratory Control Sample Results Summary—— When specified by the analytical method, the results of the laboratory control (quality control) sample shall be submitted. The following information shall be reported: control sample matrix, list of all target analytes, the true concentration for each analyte in the control sample, the reported concentration for each target analyte in the control sample, the percent recovery for each target analyte and the QC limit for percent recovery for each target analyte.

H. Serial Dilution Summary——If required by the analytical method, a summary of the serial dilution results shall be submitted. The following information shall be reported: ID number of the original sample and the serial dilution samples, sample matrix, results of the original sample analysis, results of the serial dilution sample analysis, the percent difference of each target analyte compared to the original analytes' results and the QC limit for percent difference for each target analyte.

5. **General Chemistry Requirements**

A. Analytical Results Summary——An analytical results form shall be submitted for each sample. Each form shall contain the following information: sample identification number (laboratory and/or field ID), sample matrix, date sample received, date sample analyzed, sample moisture content, dilution factor (if any), list of target analytes and detected analyte concentrations and method detection limits.

B. Blank Results Summary——A blank results form shall be submitted for all method blank samples associated with all field and QC samples. Each form shall contain the following information: list of all target analytes, matrix of the method blank, concentration units of the method blank, reported concentration of all target analytes found in all method blanks.

C. Spike Sample Results Summary——A summary of the spike sample analysis shall be submitted. The following information shall be reported: ID number of the sample chosen for spiking, sample matrix, the concentration of each spiked target analyte, the results of the unspiked sample analysis, the results of the spiked sample analysis, the percent recovery for each spiked analyte and the QC limit for percent recovery for each spiked analyte.

D. Duplicate Sample Results Summary——A summary of the duplicate sample analysis shall be submitted. The following information shall be reported: ID number of the original sample and the duplicate samples, sample matrix, results of the original sample analysis, results of the duplicate sample analysis, the relative percent difference of each target analyte for the original duplicate sample analyses and the QC limit for relative percent difference for each target analyte.

6. **Petroleum Hydrocarbon Requirements**

A. Analytical Results Summary—An analytical results form shall be submitted for each sample. Each form shall contain the information contained in Section 2A above. In addition, the identification of the GC instrument employed and the volume of extract injected shall be included.

B. Method Blank Summary—An analytical results form shall be submitted for all method blanks as well as a listing of all field and QC samples associated with each method blank. Each form shall contain the information in Section 6A above.

C. Standards Summary—A summary form containing GC standards information for all associated samples shall be submitted for all analyses. This summary shall contain the following information: instrument ID number, GC column used, date and time of standard(s) analysis, volume injected, listing of all associated field, QC and method blank samples, identity of each analyte in the hydrocarbon standard and/or the identity of petroleum product standard(s), retention times of each analyte in the hydrocarbon standard (when applicable), retention times of the surrogates and internal standard (when applicable), retention times of pristane and phytane (when applicable), retention time windows for each surrogate (when applicable), response factors/relative response factors used for quantitative determinations, response factors/relative response factors of surrogates, and percent relative standard deviations/percent differences of the surrogates.

D. Surrogate Compound Recovery Results Summary—If required by the analytical method, a summary form shall be submitted which contains the following information for all field samples, method blanks, and QC samples: sample identification number, sample matrix, surrogate compound names, concentration of surrogate compounds used, surrogate compound recoveries and QC limits for each surrogate compound.

E. Matrix Spike Results Summary—If required by the analytical method, a summary form shall be submitted which contains the following information: ID number of the sample chosen for spiking, sample matrix, the concentration of each spiked analyte/petroleum product, the results of the unspiked sample analysis, the results of the spiked sample analysis, the percent recovery for each spiked analyte/petroleum product and the QC limit for percent recovery for each spiked analyte/petroleum product.

F. Quality Control Check Standard—If required by the analytical method, a summary form shall be submitted which contains the following information: ID number of the sample, concentration of each spiked analyte/petroleum product, the results of the spiked sample analysis, the percent recovery for each spiked analyte/petroleum product, and the QC limit for percent recovery for each spiked analyte/petroleum product.

G. Duplicate Sample Results Summary—A summary of the duplicate sample results shall be submitted which contains the following: ID numbers of the original sample and the duplicate sample, sample matrix, results of the original sample analysis, results of the duplicate sample analysis, the relative percent difference calculated from the original and duplicate sample results and the QC limit for the relative percent difference (when applicable).

H. Quantitation Reports—Instrument quantitation reports shall be submitted for all field samples, QC samples, method blanks and standards.

I. Chromatograms—Chromatograms for all field samples, QC samples, method blanks and standards shall be submitted. All surrogate, internal standard (when applicable), pristane and phytane peaks on the chromatogram shall be identified along with the retention time for each peak.

[1] A negative proof is a mass spectrum offered as evidence to support an analyst's decision to negate the presence of a contaminant which has been qualitatively identified and reported by the instrument's data system.

[2] Method blanks for nonaqueous samples shall consist of performing the entire analytical procedure without any actual sample being present. The appropriate amount of sodium sulfate as specified in the current Statements of Work for Organics would be substituted as the "sample" for the semivolatile and pesticide/aroclor fractions.

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).
Rewrote IV6.

APPENDIX B

Well Search Format

Preparer

Name of Site

Case Number

Street Address

Township

County

USGS Quadrangle

Latitude

Longitude

Instructions:

1. All sources of well records/information shall be clearly documented.

2. List all wells and State well permit numbers, including active, inactive and abandoned, within ½ mile of the site boundary. Include all wells, active, inactive and abandoned at the site.

3. Locate all listed wells on a site locus map.

4. Sources that shall be used:

a. Well records search of the Bureau of Water Allocation. There is no cost if this search is performed by the individual. Appointments shall be made to examine well records by contacting the Bureau of Water Allocation at (609) 292–2957. Upon written request, the Bureau will provide the well search for a fee.

b. Contact local or county Health Department or equivalent.

5. Submit any available analyses from wells as an attachment.

6. Complete chart on back.

	Well Owner	Address	Total Depth	Length of Casing	Static Water Elev.	Use Code	Source of Information
1.							
2.							
3.							
4.							
5.							
6.							

USE CODES
A =
B = Boring

C =
D = Domestic
E = Recovery/Decontamination Pollution Control/Leachate with Pump Capacity
F = Fire
G = Irrigation
H = Heat Pump/Geothermal
I = Industrial
J = Injection/Waste Discharge
K =
L = Livestock
M = Monitoring
N = Public Non-community
O = Oil/Gas Exploration
P = Public Supply
Q = Recharge
S = Sealed
T = Test
U = Non-public
V = Gas Vent
W = Dewatering
X = Cancelled
Y = Cathodic Protection
Z = Piezometer

NEW REPLACEMENT WELL CODES
1 = Domestic
2 = Public Community
3 = Public Non–Community
4 = Industrial
5 = Irrigation
6 = Monitoring
7 = Piezometer
8 = Heat Pump/Geothermal
9 = Recovery
0 = Gas Vent

APPENDIX C

Mann–Whitney U–Test*

The random variable to be analyzed shall be the concentrations of the individual contaminants of concern in each individual monitoring well. The statistic to be evaluated is the Mann–Whitney "U". The test shall be a Mann–Whitney U–test with the size of the test equal to 0.1. The hypotheses (H) to be tested are:

H_0: $\hat{\theta}_1$ $\hat{\theta}_2$ (null hypothesis)

H_1: $\hat{\theta}_1 > \hat{\theta}_2$ (alternate hypothesis)

where $\hat{\theta}_2$ represents the stochastic size of the population of each individual contaminant during the most recent 12 month period of sampling and $\hat{\theta}_1$ represents the stochastic size of the population of each individual contaminant during the previous 12 month period. The test is applied to each contaminant in each individual monitoring well. In other words, if benzene and trichloroethene are the contaminants of concern, and there are four monitoring wells involved in the sampling program, then a total of eight Mann-Whitney tests are to be performed (benzene in each of the four monitoring wells and trichloroethene in each of the four monitoring wells).

The U statistic shall be evaluated as follows:

1. The test is applied to eight consecutive quarters of analytical data for each individual contaminant in each individual monitoring well.

2. For each quarter of data, annotate the concentration of the specific contaminant in the specific monitoring well with either a "b" for the most recent four quarters or an "a" for the four quarters from the previous 12 month period.

3. Vertically arrange the eight contaminant concentrations, with notations, in order of increasing value: the lowest value on the top, and the greatest value on the bottom.

4. For each individual "a" concentration, count the number of "b" concentrations that occur below that "a" concentration in the column.

5. Add the four values (zero or some positive number) obtained for Step 4 to calculate the "U" value.

6. All values of non–detectable (ND) or values detected below the limits of quantitation are to be ranked as "zero." It is required that appropriate detection levels/quantitation limits be achieved.

7. If two or more concentrations are identical, then two vertical columns are necessary. In the first column, rank tying "b" concentrations first, and in the second column rank tying "a" concentrations first. Calculate an interim "U" for each column ("Ua" and "Ub"). The average of these interim values is the actual "U". This is shown in Example 2, below.

The hypotheses shall be tested as follows:

1. If "U" is three or less, the null hypothesis is rejected, and it is concluded, with at least 90 percent confidence, that the concentration for the individual contaminant has decreased with time at the specific monitoring well.

2. If "U" is greater than three, the null hypothesis is accepted, and it cannot be concluded, with 90 percent or greater confidence, that the concentration for the individual contaminant has decreased with time at the specific monitoring well.

* Adapted from Mann, H. B. and Whitney, D.R., 1947, On a test of whether one of two random variables is stochastically larger than the other., Ann. Math. Statist., 18, pp. 52–54.

EXAMPLE 1: All data points are numerically unique

1. Individual contaminant: TCE
   Individual monitoring well: MW-1
2. Monitoring quarters:

			$\hat{\theta}_1$					$\hat{\theta}_2$		
Sampling Round:	1	2	3	4		5	6	7	8
Sampling Result:	506a	1021a	612a	265a		543b	261b	77b	379b
(ppb)									
(concentration)									

3. 77b
   261b
   265a
   379b
   506a
   543b
   612a
   1021a
4. 265a=2, 506a=1, 612a=0, 1021a=0
5. 2+1+0+0=3, U=3

Conclusion: "U" is three, therefore the null hypothesis is rejected. and it is concluded, with 90 percent or greater confidence, that the first sampling set ($\hat{\theta}_1$) is greater than the second sampling set ($\hat{\theta}_2$), and therefore that the concentration for the specific contaminant in the specific monitoring well has decreased over the period of the ground water monitoring program.

EXAMPLE 2: two or more numerically identical data points

1. Individual contaminant: TCE
   Individual monitoring well: MW-1
2. Monitoring quarters:

			$\hat{\theta}_1$					$\hat{\theta}_2$		
Sampling Round:	1	2	3	4		5	6	7	8
Sampling Result:	28a	Nda	61a	Nda		63b	Ndb	77b	79b
(ppb)									
(concentration)									

3. a] Ndb
   Nda
   Nda
   28a
   61a
   63b
   77b
   79b

   b] Nda
   Nda
   Ndb
   28a
   61a
   63b
   77b
   79b
4. a] Nda=3, Nda=3, 28a=3, 61a=3

   b] Nda=4, Nda=4, 28a=3, 61a=3
5. a] 3+3+3+3=12 Ua=12 ==> U=13.0
   b] 4+4+3+3=14 Ub=14

Conclusion: "U" is 13, therefore we accept the null hypothesis, and we cannot conclude, with 90 percent or greater confidence, that the first sampling set ($\hat{\theta}_1$) is greater than the second sampling set ($\hat{\theta}_2$), and we cannot conclude that the concentration for that specific contaminant has decreased with time.

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).

APPENDIX D

Historic Fill Database
Summary Table

	Minimum (ppm)[1]	Maximum (ppm)[1]	Avg (ppm)[1]	Number of Samples	Mumber > URU CDCSCC[2]	% > URU CDCSCC[2]	Number > RU CDCSCC[2]	% > RU CDCSCC[2]
B(a)A[3]	0.03	160.0	1.37	441	126	29	33	7
B(a)P[3]	0.02	120.0	1.89	431	146	34	146	34
B(b)F[3]	0.02	110.0	1.91	426	118	28	39	9
B(k)F[3]	0.02	93.0	1.79	412	101	25	26	6
I(1)P[3]	0.02	67.0	1.41	397	70	18	18	5
D(a)A[3]	0.01	25.0	1.24	286	78	27	78	27
Arsenic	0.05	1098	13.2	369	35	9	35	9
Be[3]	0.01	79.7	1.23	213	21	10	21	10
Cadmium	0.02	510	11.1	236	147	62	5	2
Lead	0.28	10700	574	538	259	48	119	22
Zinc	2.45	10900	575	197	80	4	8	4

1. ppm=parts per million
2. URU=Unrestricted Use, RU=Restricted Use, CDCSCC=Current Direct Contact Soil Cleanup Criteria
3. B(a)A=Benzo(a)anthracene, B(a)P=Benzo(a)pyrene, B(b)F=Benzo(b)fluorene, B(k)F=benxo(k)fluoranthene, I(1)P=Indeno(1,2,3–cd)pyrene, D(a)A=Dibenzo(a,h)anthracene, Be=Beryllium

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).

APPENDIX E

(RESERVED)

APPENDIX F

DECLARATION OF ENVIRONMENTAL RESTRICTIONS

The model document in this appendix contains blanks and matter in brackets [ ]. These blanks shall be replaced with the appropriate information prior to submission to the Department for approval. The model document in this appendix is not subject to the variance provisions of N.J.A.C. 7:26E–1.7.

Matter bracketed [ ] is not intended for deletion, but rather is intended to be descriptive of the variable information that may be contained in the final document.

Prepared by:

_____

[Signature]

_____

[Print name below signature]

DECLARATION OF ENVIRONMENTAL RESTRICTIONS

This Declaration of Environmental Restrictions is made as of the ____ day of _____, ____, by [Name and address of each current property owner] (together with his/her/its/their successors and assigns, collectively "Owner").

WITNESSETH:

WHEREAS, Owner is the owner in fee simple of certain real property designated as Block____ Lot____, on the tax map of the [City/Borough/ Township/Town] of [Name of municipality], _____ County, New Jersey Department of Environmental Protection Known Contaminated Site List Number ____, more particularly described on Exhibit A attached hereto and made a part hereof (the "Property"); and

WHEREAS, the lead program during the remediation was _____, and the program identification number was _____; and

WHEREAS, the New Jersey Department of Environmental Protection ("Department") approved a remedial action work plan on _____, _____ for Case No./Case Name concerning the Property in which the Department has approved the use of institutional controls and/or engineering controls in accordance with N.J.S.A. 58:10B–13; and

WHEREAS, this Declaration itself is not intended to create any interest in real estate in favor of the Department, nor to create a lien against the Property, but merely is intended to provide record or deed notice of certain conditions and restrictions on the property and to reflect the regulatory and statutory obligations imposed as a condition of using institutional and/or engineering controls; and

WHEREAS, the areas described on Exhibit B attached hereto and made a part hereof (the "Affected Areas") contain contaminants above the applicable remediation standards that would allow for the unrestricted use of the Property; and

WHEREAS, the type, concentration and specific location of the contaminants are described on one or more diagrams, maps and/or tables on Exhibit B attached hereto and made a part hereof; and

[Other WHEREAS clauses may be added to provide notice of additional site-specific concerns, such as:

WHEREAS, a narrative description of any institutional controls is provided in Exhibit C; and

WHEREAS, a narrative description of engineering controls is provided in Exhibit C; and

WHEREAS, a narrative description of the monitoring and maintenance activities of the institutional and/or engineering controls is provided in Exhibit C; and

WHEREAS, to prevent the potential for migration of the contaminants and unacceptable risk of exposure to the contamination to humans or the environment, an [impermeable/permeable] surface cover is in place at the Property, at the location shown in Exhibit D on maps or diagrams; and

WHEREAS, to prevent the potential for unacceptable exposure to the contamination to humans or the environment, a [fence, posted sign(s), liners or any other engineering controls] is in place at the Property, at the locations shown in Exhibit D on maps or diagrams; and]

WHEREAS, in accordance with the Department's approval of the remedial action work plan, and in consideration of the terms and conditions of that approval, and other good and valuable consideration, Owner has agreed to subject the Property to certain statutory and regulatory requirements which impose restrictions upon the use of the Property, and to restrict certain activities at the Property, as set forth below.

NOW, THEREFORE, Owner agrees to the restrictions listed below and hereby notifies all interested parties, owners, and operators that the applicable regulations and statutes require of each owner and operator while owning or operating the Property as follows:

1. RESTRICTED USES. The owner(s) of all or any fee interest in all or any portion of the Affected Areas and each operator of all or any portion of the Affected Areas, shall not allow any of the following uses of the following portions of the Affected Areas:

Portion of the Affected Area	Restricted Use
The Affected Areas as identified in Exhibit B.	The use shall be restricted [*to non-residential uses only and*] pursuant to paragraphs 2 and 3.

[The scope of the use restrictions will be dependent on the contaminants, concentrations, location, and type of engineering controls in place, if any. If, for example, engineering controls are designed to limit the uses to non-residential, the addition of to non-residential uses only and, as noted above, may be appropriate.]

[When different areas of concern of the Property have engineering controls in place which result in different use restrictions each area of concern must be described separately in Exhibit B.]

[Describe other portions of the Property by reference to Exhibits referenced in the WHEREAS clauses above]	[Describe nature of restricted use]

2. EMERGENCIES. In the event of an emergency which presents a significant risk to public health, safety, or the environment, the application of Paragraph 1 above may be temporarily and unilaterally suspended, by Owner, provided that the Owner:

i. Immediately notifies the Department of the emergency;

ii. Limits both the actual disturbance and the time needed for the disturbance to the minimum reasonably necessary to adequately respond to the emergency;

iii. Implements all measures necessary to limit actual or potential, present or future risk of exposure to humans or the environment to the residual contamination; and

iv. Restores the Affected Areas to the pre-emergency conditions to the extent reasonably possible, and provides a report to the Department of such emergency and restoration efforts within ninety (90) calendar days after the end of the emergency.

3. ALTERATIONS, IMPROVEMENTS, AND DISTURBANCES.

(a) Except as provided in Paragraph 2 above, no owner or operator shall make, or allow to be made, any alteration, improvement, or disturbance in, to, or about the Affected Areas which disturbs any engineering control or which creates an unacceptable risk of exposure of humans or the environment to contamination in the Affected Areas without first obtaining the express written consent of the Department. Nothing herein shall constitute a waiver of the Owner's or operator's obligation to comply with all applicable laws and regulations.

(b) Notwithstanding subparagraph 3(a) above, the Department's consent is not required for any alteration, improvement, or disturbance provided the Owner or operator:

i. Provides for restoration of any disturbance of an engineering control to pre-disturbance conditions within sixty (60) calendar days after the initiation of the alteration, improvement or disturbance; and

ii. Does not allow an exposure level above those noted under Restricted Uses, provided that all applicable worker health and safety laws and regulations are followed during the alteration, improvement, or disturbance.

4. ACCESS. While this Declaration of Environmental Restrictions is in effect, the Owner agrees to allow the Department, its agents and representatives access to the property to inspect and evaluate the continued effectiveness of the institutional or engineering controls and to conduct additional remediation to ensure the protection of the public health and safety and the environment.

5. NOTICE TO LESSEES AND OTHER HOLDERS OF PROPERTY INTERESTS. Owner shall cause all leases, grants, and other written transfers of interest in the Affected Areas to contain a provision expressly requiring all holders thereof to take the Property subject to the restrictions contained herein and to comply with all, and not to violate any of the conditions of this Declaration of Environmental Restrictions. Nothing contained in this Paragraph shall be construed as limiting any obligation of Owner to provide any notice required by any law, regulation, or order of any governmental authority.

6. ENFORCEMENT OF VIOLATIONS. The restrictions provided herein may be enforceable solely by the Department against any person who violates this Declaration of Environmental Restrictions. A violation of this Declaration of Environmental Restrictions shall not affect the status of the ownership of or title to the Property. To enforce violations of this Declaration of Environmental Restrictions, the Department may initiate one or more enforcement actions pursuant to N.J.S.A. 58:10–23.11u.

7. SEVERABILITY. If any court of competent jurisdiction determines that any provision of this Declaration of Environmental Restrictions is invalid or unenforceable, such provision shall be deemed to have been modified automatically to conform to the requirements for validity and enforceability as determined by such court. In the event that the provision invalidated is of such a nature that this provision cannot be so modified, the provision shall be deemed deleted from this instrument as though it had never been included herein. In either case, the remaining provisions of this Declaration of Environmental Restrictions shall remain in full force and effect.

8. SUCCESSORS AND ASSIGNS. This Declaration of Environmental Restrictions shall be binding upon Owner and upon Owner's successors and assigns while each is an owner or operator of the Property, and the Department.

9. TERMINATION AND MODIFICATION.

(a) This Declaration of Environmental Restrictions shall terminate only upon filing of an instrument, executed by the Department, in the office of the [County Clerk/Register of Deeds and Mortgages] of [Name of county] County, New Jersey, expressly terminating this Declaration of Environmental Restrictions.

(b) Any person may request in writing at any time that the Department modify or terminate this Declaration of Environmental Restrictions or initiate termination proceedings based on, for example, a proposal that the Property does not pose an unacceptable risk to public health and safety or the environment. Within ninety (90) calendar days after receiving such a request the Department will either:

i. Approve the request and have the Owner:

—Record with the office of the county recording officer a notice executed by the Department that the use of the Property is no longer restricted and the Declaration of Environmental Restrictions is terminated or record a modified Declaration of Environmental Restrictions delineating the new restrictions; and

—Provide written notice to each municipality in which the Property is located, with a copy to the Department, of the removal or change of the restrictions contained herein; or

ii. Issue a written notification of intent to deny the request pursuant to (c) below.

(c) The Department will set forth in a notice of intent to deny a request to modify or terminate this Declaration of Environmental Restrictions the basis for its decision. The owner can respond to the intent to deny by providing new or additional information or data. The Department will review any such new or additional information or data and issue a final decision to grant or deny the request within sixty (60) calendar days after the Department's receipt of the owner's response.

IN WITNESS WHEREOF, Owner has executed this Declaration of Environmental Restrictions as of the date first written above.

[If Owner is an individual]

WITNESS:

_____ _____

_____ _____

[Print name below signature] [Print name below signature]

[If Owner is a corporation]

ATTEST: [Name of corporation]

_____ By _____

_____ _____

[Print name and title] [Print name and title]

[If Owner is a general or limited partnership]

WITNESS: [Name of partnership]

_____ By_____

_____ _____, General Partner

[Print name and title] [Print name and title]

[If Owner is an individual]

STATE OF [State where document is executed]

SS.:

COUNTY OF [County where document is executed]

I certify that on _____, 19____, [Name of Owner] personally came before me, and this person acknowledged under oath, to my satisfaction, that this person [or if more than one person, each person]

(a) is named in and personally signed this document; and

(b) signed, sealed and delivered this document as his or her act and deed.

_____

_____, Notary Public

[Print name and title]

[If Owner is a corporation]

STATE OF [State where document is executed]

SS.:

COUNTY OF [County where document is executed]

I certify that on _____, 19____, [Name of person executing document on behalf of Owner] personally came before me, and this person acknowledged under oath, to my satisfaction, that:

(a) this person is the [secretary/assistant secretary] of [Owner], the corporation named in this document;

(b) this person is the attesting witness to the signing of this document by the proper corporate officer who is the [president/vice president] of the corporation;

(c) this document was signed and delivered by the corporation as its voluntary act and was duly authorized;

(d) this person knows the proper seal of the corporation which was affixed to this document; and

(e) this person signed this proof to attest to the truth of these facts.

_____

_____

[Print name and title of attesting witness]
Signed and sworn before me on
, 19

_____

_____, Notary Public
[Print name and title]

[If Owner is a partnership]
STATE OF [State where document is executed]
SS.:
COUNTY OF [County where document is executed]

I certify that on _____, 19___[Name of person executing document on behalf of Owner] personally came before me, and this person acknowledged under oath, to my satisfaction, that this person:

(a) is a general partner of [Owner], the partnership named in this document;

(b) signed, sealed and delivered this document as his or her act and deed in his capacity as a general partner of [owner]; and

(c) this document was signed and delivered by such partnership as its voluntary act, duly authorized.

_____

_____, Notary Public
[Print name and title]

EXHIBIT A

Metes and Bounds Description of Property

(Attach a tax map of the site which shows the metes and bounds and the block and lot numbers of the site)

EXHIBIT B

Description of Affected Areas

(Attach maps, prepared by an engineer or surveyor, showing the location, depth and concentration of all contaminants exceeding applicable remediation standards, showing any institutional or engineering controls implemented or to be implemented at the site)

Contaminant	Concentration	Location
[List contaminants]	[List concentrations]	[Describe location of contaminants by reference to exhibits A and B]

EXHIBIT C

Include narratives describing institutional and engineering controls and the monitoring and maintenance activities for the institutional and engineering controls.

EXHIBIT D

Maps and diagrams of as-built engineering controls; these maps and diagrams should show the location of the engineering controls. Maps shall be compatible with the Department's Geological Information System, the following shall be included as part of this Exhibit: a clean legible copy of that section of the United States Geological Survey Quadrangle map where the facility is located with the facility clearly identified on this map, the scale of this map should include enough of the surrounding community and road system so the site can be easily identified from air photography; a clean legible copy of a map that identifies by name roads in the vicinity of the Site for example Hagstrom County maps; a map of the Site to scale that includes as-built diagrams of major surface topological features such as buildings, roads, parking lots, this map should also include as-built diagrams of engineering controls making sure that the engineering controls are clearly distinguishable, the engineering controls may be lightly shaded. If the engineering control is greater in size than 1 acre the map/diagram should show the areas of highest contaminant concentrations.

New Rule, R.1997 d.499, effective November 17, 1997.
See: 29 N.J.R. 46(a), 29 N.J.R. 4957(a).