

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).

Sec: 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, except an area of concern that consists of an underground storage tank storing heating oil for on-site consumption in a one to four family residential building. 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 assessment 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 all data identified or collected in the preliminary assessment and the site investigation to identify all of the site-specific contaminants that are of ecological concern. Contaminants of ecological concern shall include, without limitation, those that exhibit the ability to biomagnify or bioaccumulate, or contaminants with concentrations that exceed applicable standards, criteria or guidelines recommended by the Department, NOAA, U.S. Department of the Interior, EPA or other Federal natural resource agencies for use in conducting ecological assessments and investigations. Such standards, criteria and 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 natural resources 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 of 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 natural resources identified in (a)2 above; or any observations of potential impact to the identified environmentally sensitive natural resources 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 natural resource exists on, or immediately adjacent to, the site; and
- iii. Potential contaminant migration pathways to an environmentally sensitive natural resource exist, or an impact to an environmentally sensitive natural resource 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).

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

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

In (a), added an exception at the end of the first sentence, substituted "with concentrations that exceed applicable standards," for "exhibiting concentrations that exceed available" following "contaminants" and inserted a reference to the U.S. Department of the Interior in the first sentence and inserted a reference to standards in the second sentence in 1, substituted references to environmentally sensitive natural resources for references to environmentally sensitive areas in 2 through 4, and inserted "from an area of concern" following "pathways" in 4iii.

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

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

In (a)1, rewrote the first sentence.

7:26E-3.12 Site investigation—landfills and historic fill material

(a) If a landfill may be present at the site, the person responsible for conducting the remediation shall conduct a site investigation as follows:

1. Confirm whether a landfill is present;

2. Determine if buried containers including, but not limited to, drums, tanks, pressurized gas cylinders, munitions or explosives of concern, or unexploded ordnance are present by conducting a survey, by a person qualified and experienced in the use of geophysical sensing techniques, using an appropriately calibrated electro magnetometer or other appropriate geophysical sensing technique to detect potential buried containers as follows:

- i. Use a 25-foot transect spacing across the landfill and around the perimeter of the landfill a sufficient distance beyond the potential landfill limits to ensure all areas with potential waste are surveyed; and
- ii. Take and record readings every five feet along each transect; and

3. Evaluate the landfill and determine the presence and effectiveness of existing control systems, as applicable:

i. For each area of soil erosion and sediment deposition around the perimeter of the landfill:

(1) Collect and analyze soil and sediment samples from each area pursuant to N.J.A.C. 7:26E-3.6 and 3.8, respectively; and

(2) Bias samples to areas of likely contamination area pursuant to N.J.A.C. 7:26E-3.4;

ii. Collect a minimum of one leachate and one soil/sediment sample from each seep identified around the perimeter of the landfill. If evidence of seeps are identified, but leachate is not present at the time of sampling, then collect samples when leachate is present;

iii. Collect ground water samples from any existing monitoring wells pursuant to N.J.A.C. 7:26E-3.7;

iv. Analyze samples collected above for TCL/TAL, pH, ammonia (as N), nitrate (as N), total dissolved solids (TDS), and conductivity;

v. Screen any existing vents for lower explosive level, volatile organic contaminants, methane and hydrogen sulfide using appropriate field analytical techniques such as photoionization detector (PID), flame ionization detector (FID), or other suitable instruments capable of detecting the contaminants pursuant to N.J.A.C. 7:26E-2.1(b); and

vi. Determine the type, extent, and condition of the landfill cap or cover including chemical analysis of soil for TCL/TAL pursuant to N.J.A.C. 7:26E-3.6.

1. Presentation of sample data that indicates contamination is below the applicable remediation standard. This may be accomplished after a remedial action has been implemented; or

2. By establishment of a contaminant gradient as follows:

i. Contaminant levels decrease by:

(1) Ten percent or more between the initial characterization sample and each of two sequential delineation samples; or

(2) A factor of five or more between the initial characterization sample and a single delineation sample; and

ii. Once a contaminant gradient has been established, the approximate limits of contamination may be reasonably estimated by extrapolation in order to complete the remedial investigation. However, when a contaminant gradient is used to estimate the limits of contamination, the extent of contamination above the applicable unrestricted use remediation standard shall be confirmed using laboratory analyses prior to the completion of a remedial action; and

3. If a vertical soil contaminant gradient has not been established to the water table:

i. For contaminants having water solubility greater than 100 milligrams per liter at 20 degrees Celsius to 25 degrees Celsius, saturated zone soil shall be delineated for residual product pursuant to N.J.A.C. 7:26E-2.1(a)14, and for direct contact soil cleanup criteria; and

ii. For other contaminants, delineate for direct contact soil cleanup criteria.

(c) The person responsible for conducting the remedial investigation shall conduct notification and public outreach pursuant to N.J.A.C. 7:26E-1.4.

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 "restricted use"; deleted (a)4ii, substantially amended (a)5; deleted (a)7; recodified former (a)8 as (a)7; substantially amended (b); in (b)2ii, added "in order to complete . . . completion of the remedial action; and"; and added (b)3.

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

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

In (a), inserted "soil" preceding "remediation standards" and "or the applicable groundwater or surface water remediation standard pursuant to N.J.A.C. 7:26E-1.13" preceding "The purposes".

Amended by R.2008 d.262, effective September 2, 2008.

See: 39 N.J.R. 2687(a), 40 N.J.R. 5010(a).

Added (c).

Special amendment, R.2009 d.361, effective November 4, 2009 (to expire May 4, 2011).

See: 41 N.J.R. 4467(a).

Rewrote the introductory paragraph of (a); and in the introductory paragraph of (b), rewrote the first sentence.

Administrative correction.

See: 42 N.J.R. 778(a).

Readoption of special amendment, R.2011 d.251, effective September 8, 2011.

See: 43 N.J.R. 1077(a), 43 N.J.R. 2581(b).

Provisions of R.2009 d.361 readopted with changes incorporated at 42 N.J.R. 778(a).

Case Notes

Where respondents failed to immediately mitigate vapor and groundwater hazards down-gradient at a nearby property, and failed to perform proper remedial investigations, most particularly by not delineating the horizontal and vertical extent of groundwater contamination, respondents' liability was clear; contrary to respondents' allegations, the penalty was not duplicative where one penalty was for failing to immediately mitigate the effects of a discharge on a specific neighbor and the other was for delaying the remedial investigation of all potential impacts (adopting 2007 N.J. AGEN LEXIS 149). N.J. Dep't of Env'tl. Prot. v. Foster, OAL Dkt. No. EHW 83-06, 2007 N.J. AGEN LEXIS 505, Final Decision (May 4, 2007).

7:26E-4.2 Remedial investigation workplan

(a) The person responsible for conducting the remediation shall prepare a remedial investigation workplan prior to conducting the remedial investigation. The remedial investigation workplan shall be in a format that corresponds to the outline of this section.

(b) The remedial investigation workplan shall include:

1. A detailed schedule for all remedial investigation activities, including timelines and target dates for:

i. The start and completion of all field activities;

ii. Receipt of analytical results required in N.J.A.C. 7:26E-4.1 and 4.3 through 4.7; and

iii. Submission of all reports to the Department;

2. A description of the role of principal personnel who will participate in the remedial investigation:

i. The information in (b)2i(1) and (2) below about project personnel, including the project manager and, if applicable, a facility contact, legal contact, and contractor and subcontractor contacts, shall be provided. In addition, the telephone number of the project manager shall be provided.

(1) Responsibilities; and

(2) Authority on the project.

ii. If the principal personnel designated on the project change, information for the new personnel shall be submitted to the Department within 30 calendar days of such change;

3. The following historical information, unless the remediation is directed at either a specific discharge event, rather than a particular area of concern at a site, or any underground tank or underground tank system:

i. Historical site plans, if available, after completion of a due diligence search, and facility as-built construction drawing detailing, at a minimum, all information pursuant to N.J.A.C. 7:26E-3.2(a) and, in addition,

topography using two-foot contours, potential contaminant conduits including all subsurface utilities. Maps depicting the entire site shall be scaled at one inch to 200 feet or less and individual area of concern maps shall be scaled at one inch to 40 feet or less. If more than one map is submitted, maps shall be presented as overlays, keyed to a base map; and

ii. An interpretive aerial history pursuant to N.J.A.C. 7:26E-3.1(c) 1vi including all photos. Matched pairs shall be provided, if available, to allow for stereo viewing. Photos shall include a north arrow, bar scale, date and source of photo, and site boundaries. Matte finish reproductions are preferred;

4. Descriptions of the following unless the remediation is directed at either a specific discharge event, rather than a particular area of concern at a site, or any underground tank or underground tank system. If applicable, the Department Geographic Information System shall be used as a source of information for (b)4i through vi below:

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

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

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 shall be required. This map shall be that USGS revision in effect at the time of the report and shall clearly note the facility location and property boundaries. When a portion of the USGS quadrangle is used, the scale (including a bar scale), north arrow, contour interval, longitude and latitude, along with the name and date of the USGS quadrangle shall be noted on the map;

iv. In addition, a wetlands map from the "National Wetlands Inventory" which provides a wetlands map superimposed on a USGS 7.5 minute topographic quadrangle shall be included;

v. Copies of boring logs from on-site construction; and

vi. Land use within a 1,000 foot radius of the site boundary including proximity of the site to environmentally sensitive areas and/or sensitive human receptors (for example, residences, schools, parks);

5. A description of each area of concern including dimensions, suspected contaminants, and suspected source of discharge;

6. An area of concern sampling summary table of proposed sampling and analysis shall be presented in the remedial investigation workplan text or on the sample location map specified in (b)7 below, according to the following headings (a suggested format is included in Table 4-1):

i. Location: Use the same alpha or numeric designation as shown on the scaled sampling location map;

ii. Matrix: Waste, soil, surface water, ground water, or sediment;

iii. Sample depth:

(1) Soil/sediment—depth of sample increment which will be analyzed;

(2) Ground water—indicate water bearing zone to be sampled (water table, confined, and semi-confined) and sample depth;

(3) Surface water—indicate depth of water sample.

iv. Analytical parameters for each sample (for example, target analyte list metals, full target analyte list/target compound list scans); and

v. Sampling method;

7. Proposed sample locations shall be indicated on a sample location map, scaled as in (b)3i above. Sample locations may be superimposed on maps presented pursuant to (b)3i above;

8. Other sampling proposals including any proposals to conduct the following studies:

i. Treatability, bench scale, pilot studies pursuant to N.J.A.C. 7:26E-4.1(a)4i;

ii. Data necessary to develop discharge permit effluent limitations; and

iii. Ecological investigations for the purposes of characterizing natural resource injuries pursuant to N.J.A.C. 7:26E-4.7;

9. Quality assurance project plan including proposed sampling/analytical methods pursuant to N.J.A.C. 7:26E-2.2;

10. Health and safety plan pursuant to N.J.A.C. 7:26E-1.10; and

11. A completed case inventory document prepared pursuant to the Department's Guidance for the Preparation of the Case Inventory Document. The case inventory document shall be provided at the front of the workplan.

obvious signs of contamination. At least one drilling location per area of concern shall include continuous split spoon samples to define the subsurface stratigraphy. Drilling logs shall include all data required pursuant to N.J.A.C. 7:26E-3.6, Soil investigations. Other methods may be used if documentation acceptable to the Department is provided indicating that the methods were appropriate;

5. Have a sufficient number of rock cores collected during the drilling of bedrock monitoring wells, piezometers and other borings, if appropriate, to obtain a general understanding of the fracture patterns beneath the site. The corings shall be conducted using the ASTM D2113 Diamond Drilling Method, as amended and supplemented, incorporated herein by reference. Other methods may be used if documentation acceptable to the Department is provided indicating that the methods were appropriate. The core logs shall include:

- i. Lithology;
- ii. Fracture frequency;
- iii. Degree of weathering;
- iv. Fracture spacing;
- v. Orientation of fractures;
- vi. Odors and discoloration in the rock core;
- vii. Percent recovery; and
- viii. Any other information appropriate for the investigation.

6. If appropriate, an evaluation of the bedrock structure at the site including strike and dip of the bedding planes, orientation of faults, joints and fractures; plunges and trends of folds, must be completed through a field evaluation. Published geologic literature may be used if appropriate.

7. Be surveyed by a New Jersey licensed surveyor as follows:

- i. The inner well casing must be surveyed to the nearest hundredth (0.01) foot in relation to the permanent, on-site datum and horizontally to an accuracy of one-tenth of a second latitude and longitude; and
- ii. A permanent water level measurement mark shall be etched onto the top of the inner well casing to allow for accurate, consistent and comparable water level measurements over time.

8. Be developed to yield a non-turbid discharge, when possible;

9. Be decommissioned upon completion of the investigation in accordance with N.J.A.C. 7:9D unless otherwise approved by the Department;

10. Have the monitoring well permit number and site specific well identification number prominently displayed and permanently affixed to the monitoring well; and

11. Be constructed with a locking cap and generally protected from damage and vandalism. The person responsible for conducting the remediation shall, within 14 days after discovering the damage, properly repair or decommission the damaged monitoring well or piezometer in accordance with N.J.A.C. 7:9D.

(h) The results of initial ground water analyses shall be evaluated as follows:

1. If the contaminant concentrations found in all ground water samples are below the applicable remediation standards, no further remediation is necessary for ground water;

2. If the contaminant concentrations found in any ground water samples exceed the applicable remediation standard, the ground water may be resampled to confirm the presence of contamination. This confirmation sampling shall include at least two additional samples taken over a 30 day period, the results of which may be averaged with the original result to determine compliance with the applicable remediation standard; and

3. If ground water contamination above the applicable remediation standards has been confirmed, the person responsible for conducting the remediation shall perform the requirements in (h)3i through ix below. If the person responsible for conducting the remediation claims that ground water contamination is from an offsite source, then a background ground water investigation shall be performed pursuant to N.J.A.C. 7:26E-3.7(g).

i. Delineate the vertical and horizontal extent of ground water contamination and the sources of ground water contamination, including, but not limited to, the extent of free and/or residual product as determined pursuant to N.J.A.C. 7:26E-2.1(a)14;

ii. Confirm the direction of ground water flow in each affected aquifer or water bearing zone, using all monitoring wells located within each specific aquifer or water bearing zone pursuant to N.J.A.C. 7:26E-3.7(e)3; and

iii. Conduct aquifer tests, which may include pumping tests, packer tests, and slug tests or other appropriate analysis to adequately characterize the impacted aquifer at the site. At a minimum, this shall include the site water table gradient, hydraulic conductivity (K), and an estimate of the rate of ground water and contaminant flow in the aquifer. If pumping the aquifer is determined to be a feasible option for remediation, then additional aquifer characteristics such as transmissivity (T) and storativity (S) must be determined through the use of a pumping test;

iv. If a model to further define characteristics of the ground water flow system is used, documentation acceptable to the Department shall be provided in the remedial investigation report (N.J.A.C. 7:26E-4.8) indi-

cating that the model was appropriate. Specific details on the type of model, input parameters used and referenced, boundaries and limitations of the model shall be submitted to the Department upon request along with a justification as to why the model was selected;

v. Perform an updated well search pursuant to N.J.A.C. 7:26E-1.17, based on the results of:

- (1) The delineation performed in (h)3i above; and
- (2) The confirmed groundwater flow direction determined in (h)3ii above;

vi. Sample any existing potable and supply wells identified pursuant to the well search which are suspected to be contaminated by the site in question;

vii. Evaluate any surface water body that may be impacted by the contaminated ground water pursuant to N.J.A.C. 7:26E-3.8 and 4.5 (Surface Water Investigations);

viii. Evaluate any subsurface utilities, basements or other structures to determine whether vapor hazards as a result of the ground water contamination may exist for receptors associated with the utility or structure. Measurement of oxygen levels, lower explosive limits (LEL) and the presence of organic vapors should be included in this evaluation; and

ix. Evaluate the current and potential ground water uses using a 25-year planning horizon utilizing municipal and water purveyor planning data.

(i) If geologic conditions are suitable, soil gas studies shall be conducted to locate sources of ground water contamination when ground water contamination by volatile organic compounds is identified but no apparent source is identified. If geologic conditions are not suitable for soil gas studies, other suitable field investigation techniques shall be used for source identification.

Amended by R.1997 d.124, effective May 19, 1997 (operative July 18, 1997; 7:26E-4.4(h)3v(1) operative November 19, 1997).

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

Substantially amended section.

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

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

Rewrote the section.

Administrative correction.

See: 35 N.J.R. 1928(a).

Amended by R.2005 d.222, effective July 5, 2005.

See: 37 N.J.R. 405(a), 37 N.J.R. 2499(a).

In (h), updated the N.J.A.C. reference in 3.

Special amendment, R.2009 d.361, effective November 4, 2009 (to expire May 4, 2011).

See: 41 N.J.R. 4467(a).

In the introductory paragraph of (g), substituted "ground water" for "groundwater"; in (g)1, deleted the second sentence; and rewrote (g)11.

Administrative correction.

See: 42 N.J.R. 778(a), 1862(a).

Readoption of special amendment, R.2011 d.251, effective September 8, 2011.

See: 43 N.J.R. 1077(a), 43 N.J.R. 2581(b).

Provisions of R.2009 d.361 readopted with changes incorporated at 42 N.J.R. 778(a) and 42 N.J.R. 1862(a).

7:26E-4.5 Remedial investigation of surface water, wetlands and sediment

(a) The remedial investigation shall include an investigation of any surface water, wetlands and sediments which may have been impacted by contamination emanating from the site.

(b) The remedial investigation of surface water, wetlands and sediment shall be conducted for the purposes of a remedial investigation pursuant to the requirements for the appropriate media in N.J.A.C. 7:26E-3.4 and 4.1 according to the quality assurance and quality control requirements pursuant to N.J.A.C. 7:26E-2.

(c) The surface water investigation shall be conducted pursuant to (d) below to evaluate the relationship between contaminated ground water, sediments and surface waters, unless:

1. If the person responsible for conducting the remediation determines that this migration pathway is not considered significant, that person shall provide a technical rationale supporting that conclusion in the remedial investigation report; or

2. The Department approves a less stringent water quality analysis:

- i. Based on site-specific conditions; and
- ii. Supported by appropriate supporting documentation.

(d) The surface water investigation shall include:

1. Sampling designed to account for seasonal or short-term flow and water quality fluctuations (dry vs. wet weather), system hydraulics (obtaining flow proportioned samples) and potential contaminant characteristics (density, solubility).

2. A receiving water body analysis on any surface water body to which contaminated ground water is discharging, including a water quality analysis program with sampling stations upstream and downstream of the contaminated site, any existing point source discharges at that site, and any proposed discharge locations as follows:

- i. Procedures in accordance with the methods identified in (d)2ii below, including, without limitation:

- (1) Water quality sampling for each constituent of concern potentially emanating from a site;

- (2) At least two sample sets must be taken during critical, low flow conditions;

- (3) At least one sediment sample shall be taken and analyzed for the appropriate parameters identified in (d)2i(1) above, during one of the sampling events;

- (4) For non-tidal water bodies, samples shall be taken at the area of discharge, and at least one location downstream;