



**New Jersey Department of Environmental Protection
Site Remediation Program**

Phase-in for the implementation of the “Protocol for Addressing Extractable Petroleum Hydrocarbons” and the associated analytical method “Analysis of Extractable Petroleum Hydrocarbon Compounds (EPH) in Aqueous and Soil/Sediment/Sludge Matrices”

(Version 3.0, August 9, 2010)

The Brownfield and Contaminated Site Remediation Act mandates that the New Jersey Department of Environmental Protection (Department) adopt health based soil remediation standards (N.J.S.A. 58:10B-12). The Department has developed a new analytical method to develop and implement health based soil remediation standards for non-volatile petroleum hydrocarbon mixtures (“*Analysis of Extractable Petroleum Hydrocarbon Compounds (EPH) in Aqueous and Soil/Sediment/Sludge Matrices*”; “NJDEP EPH Method” Revision 2 or 3; http://nj.gov/dep/srp/guidance/srra/eph_method.pdf). The Department previously had different requirements for remediation goals and analytical methods. The Department intends to transition from these previous requirements to those described in the guidance document “*Protocol for Addressing Extractable Petroleum Hydrocarbons*” (http://www.nj.gov/dep/srp/guidance/srra/eph_protocol.pdf).

The narrative description of the phase-in follows. The tables following the narrative highlight the analytical methods, contingency analyses, and remediation criteria/standards (both for petroleum hydrocarbons and contingency contaminants) in effect at the time a work plan or report was submitted to the Department for review or filed with the Department by a licensed site remediation professional (LSRP).

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- I. Remedial Action Work Plans (RAWP) and Remedial Action Reports (RAR) that have been approved by the Department or filed with the Department by a LSRP prior to September 1, 2010** need to use the analytical methods, remediation criteria, required contingency sample analyses, and scheduling specified in the approved document.
 - II. For RAWPs submitted to the Department prior to September 1, 2010** but not yet approved, in order to use the analytical methods, remediation criteria, and required contingency sample analyses that were in effect as of the date of submission of the RAWP, the following conditions must be met:
 - A.** Prior to May 7, 2012, the RAWP must either be approved by the Department or filed by a LSRP with the Department;
 - B.** The proposed work must be completed according to the submitted construction schedule with an appropriate adjustment for when the activities described in the work plan actually commence; and
 - C.** No Notices of Violation (NOV) may be issued.

If compliance with the above cannot be achieved, then the analytical methods, remediation values, and required contingency sample analyses as of September 1, 2010 will apply. The responsible party must ensure that the RAWP is either approved by the Department prior to May 7, 2012 or filed with the Department by a LSRP prior to May 7, 2012. If it becomes questionable that an approval can be

obtained from the Department in time to meet the May 7, 2012 deadline, then the responsible party should make appropriate arrangements with a LSRP to meet the filing requirements.

III. For RARs submitted to the Department by September 1, 2010 but not yet approved, in order to use the analytical methods, remediation values, and required contingency sample analyses that were in effect as of the date of submission of the RAR, the following conditions must be met:

A. By May 7, 2012, the RAR must either be approved by the Department or filed by a LSRP with the Department; and

B. No NOVs may be issued.

If compliance with the above cannot be achieved, then the analytical methods, remediation criteria, and required contingency sample analyses as of September 1, 2010 will apply. The responsible party must ensure that the RAR is either approved by the Department prior to May 7, 2012 or filed with the Department by a LSRP prior to May 7, 2012. If it becomes questionable that an approval can be obtained from the Department in time to meet the May 7, 2012 deadline, then the responsible party should make appropriate arrangements with a LSRP to meet the filing requirements.

If the RAR was performed in compliance with an approved RAWP, then the analytical methods, remediation criteria, and required contingency sample analyses in the approved RAWP would be applicable.

IV. For RAWPs or RARs submitted to the Department for review or filed with the Department by a LSRP on or after September 1, 2010, the new EPH Method and the current guidance described in the document "Protocol For Addressing Extractable Petroleum Hydrocarbons" must be employed for determining the remediation goal and any required contingency sample analysis.

V. The Department reserves the right to approve site-specific exceptions to the above when special conditions merit doing so.

PHASE-IN TIME FRAME FOR NUMBER 2 FUEL OIL and DIESEL FUEL OIL (CATEGORY 1)

Time Frame	Analytical Method for PHC	TPHC/EPH Criterion	Contingency Analyses	Contingency Sample Remediation Standards
September 30, 2007 through September 16, 2008	USEPA SW846 Method 8015B or NJDEP OQA-QAM-025	10,000 mg/kg	Analyze highest 25% of soil samples that exceed 1,000 mg/kg TPHC for VO+10	Soil Cleanup Criteria (SCC)
September 17, 2008 through March 17, 2009	USEPA SW846 Method 8015B or NJDEP OQA-QAM-025 rev. 7	10,000 mg/kg or 5,100 mg/kg	Analyze highest 25% of soil samples that exceed 1,000 mg/kg TPHC for either VO+10 or BN+15	Either SCC or Soil Remediation Standards (SRS)
March 18, 2009 through August 31, 2010	USEPA SW846 Method 8015B/C or NJDEP OQA-QAM-025 rev. 7 or NJDEP EPH Method Revision 2*	5,100 mg/kg	Analyze highest 25% of soil samples that exceed 1,000 mg/kg EPH for 2-methylnaphthalene and naphthalene	SRS
On or after September 1, 2010	NJDEP EPH Method Revision 3	5,100 mg/kg (residential) [#] or 54,000 mg/kg (non-residential) [#]	Analyze highest 25% of soil samples that exceed 1,000 mg/kg EPH for 2-methylnaphthalene and naphthalene	SRS

* The person responsible for conducting the remediation may choose to use the "Analysis of Extractable Petroleum Hydrocarbon Compounds (EPH) in Aqueous and Soil/Sediment/Sludge Matrices" (NJDEP EPH Method Revision 2) prior to September 1, 2010, provided that a New Jersey certified laboratory performs the analyses. NJDEP EPH Method Revision 3 must be used on and after September 1, 2010.

Note that the residential and non-residential health-based remediation criteria for EPH may be superseded by ecological, product, and sheen issues. Refer to the "Protocol for Addressing Extractable Petroleum Hydrocarbons" (http://www.nj.gov/dep/srp/guidance/srra/eph_protocol.pdf) for a discussion regarding this issue.

PHASE-IN TIME FRAME FOR NON-VOLATILE PETROLEUM HYDROCARBON MIXTURES OTHER THAN NUMBER 2 FUEL OIL and DIESEL FUEL OIL (CATEGORY 2)

Time Frame	Analytical Method for PHC	TPHC/EPH Criterion	Contingency Analyses	Contingency Sample Remediation Standards
September 30, 2007 through September 16, 2008	NJDEP OQA-QAM-025	10,000 mg/kg	Pursuant to Technical Requirements for Site Remediation (TRSR), Table 2-1	SCC
September 17, 2008 through March 17, 2009	NJDEP OQA-QAM-025 rev. 7	10,000 mg/kg	Pursuant to TRSR, Table 2-1	Either SCC or SRS
March 18, 2009 through August 31, 2010	NJDEP OQA-QAM-025 rev. 7 or NJDEP EPH Method Revision 2*	10,000 mg/kg*	Pursuant to TRSR, Table 2-1	SRS
On or after September 1, 2010	NJDEP EPH Method Revision 3 [#]	Sample-specific criterion using EPH Calculator [#]	Pursuant to TRSR, Table 2-1	SRS

* The person responsible for conducting the remediation may choose to use the "Analysis of Extractable Petroleum Hydrocarbon Compounds (EPH) in Aqueous and Soil/Sediment/Sludge Matrices" (NJDEP EPH Method Revision 2) prior to September 1, 2010, provided that a New Jersey certified laboratory performs the analyses. Note that if this method is used to analyze the soil samples for mixtures other than No. 2 fuel oil/diesel fuel oil, then the EPH Calculator must be used to determine the sample-specific EPH soil remediation criterion. NJDEP EPH Method Revision 3 must be used on and after September 1, 2010.

If the person responsible for conducting the remediation has reason to believe that the EPH concentration in a sample is below 1,700 mg EPH/kg, the person responsible for conducting the remediation has the choice of using the non-fractionation option of NJDEP EPH Method Revision 3. If the EPH concentration determined by this option is less than or equal to 1,700 mg EPH/kg, then it is not necessary to analyze the sample using the fractionation option of NJDEP EPH Method Revision 3, nor is it necessary to determine the sample-specific health-based soil remediation criterion using the EPH Calculator.