

NJDEP Implementation Strategy for Revised Vapor Intrusion Screening Levels (Revised March 2013)

The Department is implementing updates to the Vapor Intrusion Screening Levels (VISL) due to changes in toxicity values and risk-based equations reflected in the most recent USEPA Regional Screening Level (RSL) Tables. The Department is also expanding the list of residential Rapid Action Levels (RAL) to include all contaminants listed in the Department's Generic VISL table and is adding non-residential RAL. The VISL include the screening levels for ground water, soil gas, indoor air and the rapid action levels. The new list of updated screening levels is shown in [Tables 1 through 3](#). The revised VISL will be implemented starting January 16, 2013. Since these changes will affect existing cases, the Department has prepared an implementation strategy for using the new VISL. The implementation strategy is presented in the form of a flow chart. A hot topic training session on the VISL Implementation Strategy will be held on January 30, 2013. This training will also be available as a Webinar and will be posted on the NJDEP website.

VISL Implementation Strategy Flow Chart

The Department has prepared a flow chart to assist with the implementation of the new VISL. The [VISL Implementation Strategy Flow Chart](#) highlights the following actions which apply to all cases:

- All new cases initiated after January 16, 2013 shall follow the applicable Technical Rules and regulatory and mandatory timeframes using the new VISL.
- Unrestricted use final remediation documents for ground water issued prior to January 16, 2013 require no further investigation for the vapor intrusion (VI) pathway.
- Restricted use final remediation documents for ground water issued prior to January 16, 2013 require an evaluation of the VI pathway as part of the biennial certification. Review existing data for *order of magnitude changes* (discussed below) using the new VISL. Based on this information, implement additional remediation as required.
- Remedial Action Workplans for ground water issued prior to January 16, 2013 require a review of existing data for *order of magnitude changes* (discussed below) using the new VISL. Based on this information, implement additional remediation as required.
- Provided none of the abovementioned scenarios exist, the investigator shall employ up to 90 days to evaluate all existing site conditions and data using the new VISL. The 90-day review period terminates on April 16, 2013.
- Upon completion of the review (or April 16, 2013, whichever is sooner), follow the applicable Technical Rules and regulatory and mandatory timeframes using the new VISL.

Order of Magnitude Change

An order of magnitude evaluation is necessary when the new VISL is 10 times or more lower in concentration compared to the March 2007 VISL and additional remediation will be required when an order of magnitude change is noted (see [VISL tables](#)). The contaminants that fall into this category are:

Ground Water Screening Level

1,1-Dichloroethane

Ethylbenzene

1,2,4-Trichlorobenzene

Soil Gas Screening Level

1,1-Dichloroethane (Residential and Nonresidential)

Ethylbenzene (Residential and Nonresidential)

1,2,4-Trichlorobenzene (Residential)

Indoor Air Screening Level

1,1-Dichloroethane (Residential and Nonresidential)

Ethylbenzene (Residential and Nonresidential)

Rapid Action Level

Ethylbenzene (Residential)

Reclassification of Immediate Environmental Concern (IEC) or Vapor Concern (VC) Cases

The screening levels for some compounds (such as tetrachloroethene or PCE) are increasing. This may result in situations in which cases currently classified as an IEC or VC may no longer meet the criteria as an IEC or VC. These cases can be reclassified based on the new VISL. For the reclassification of an IEC or VC case, the IEC case manager is required to be contacted. Heating season samples must be used in the determination of whether an IEC or VC case can be reclassified. For a case to be reclassified, the LSRP should provide an updated IEC/VC spreadsheet (available at <http://www.nj.gov/dep/srp/srra/forms/>) and an email requesting the change along with the justification for the change. It should be noted that residential RALs will be applicable for sensitive receptors such as schools and daycares.

Naphthalene and 2-Methylnaphthalene

The new VISL Tables (March 2013) contain one new compound, naphthalene. The inclusion of this compound was necessitated by the May 2012 Technical Rules which require the analysis of VI samples for naphthalene and 2-methylnaphthalene under specific circumstances [N.J.A.C. 7:26E-2.1(c)3].

Based on a continuing review of scientific information, the Department has determined that the analysis for 2-methylnaphthalene will not be required for VI samples collected during the investigation of kerosene, jet fuel, diesel fuel, fuel oil No. 2, and heavier petroleum products. The Department intends to update the Technical Rules to remove the requirement to analyze VI samples for 2-methylnaphthalene. Until the rule is updated, persons responsible can apply a variance pursuant to N.J.A.C. 7:26E-1.7 to not perform this analysis.

In addition to Method TO-17, the Department is developing provisions for analyzing naphthalene using either Method TO-15 or Low Level TO-15. The announcement on the revised methodology should be released in March 2013. Due to this revision, the Department will not require the collection and analysis of naphthalene for the next six (6) months. Starting on July 16, 2013, sampling and analysis for naphthalene, consistent with N.J.A.C. 7:26E-2.1(c)3, will be required. The modified TO-15 methodologies should be available at that time.