

## Heating Oil Tank System Remediation Rules at N.J.A.C. 7:26F

Updated: December 11, 2018

### New Heating Oil Tank System Remediation Rules at N.J.A.C. 7:26F released August 6, 2018

New Jersey Department of Environmental Protection (NJDEP) issued remediation rules to replace the UHOT (Unregulated Heating Oil Tank) Rules. These rules will be referred to as the HOTS (Heating Oil Tank Systems) rules and are found in the newly issued chapter N.J.A.C. 7:26F.

#### What falls under the HOTS Rules?

- A Heating Oil Tank System (HOTS) is defined as a residential above ground heating oil tank system, small non-residential above ground heating oil tank system ( $\leq 2,000$  gallons) or an unregulated heating oil tank system (underground storage tanks/USTs).
- Tanks that are not otherwise regulated under the UST Rules at N.J.A.C. 7: 14B.
- Most HOTS are associated with residential properties.

#### Analytical Changes between the UHOT Rules and the HOTS Rules

- Table 2-1 from N.J.A.C. 7:26E has been amended for the following:

Petroleum Product	Soil/Sediment (OLD)	Soil/Sediment (NEW)	Water (OLD)	Water (NEW)
<b>No. 2 Heating Oil</b>	EPH <sup>1</sup> . Analyze 25% samples where EPH is $\geq 1,000$ mg/kg for 2-Methyl Naphthalene and Naphthalene <sup>2</sup>	Same <u>PLUS</u> May perform SPLP to develop a site specific IGW standard for 2-Methyl Naphthalene	VO+15 TICs <sup>3</sup> , SVO+15 TICs <sup>4</sup>	Same <u>PLUS</u> Add to VO: 1,2,4-Trimethylbenzene <i>and</i> Add to SVO: <del>1-methylnaphthalene</del> *
<b>No. 4 and No. 6 Heating Oil</b>	EPH <sup>1</sup> . Analyze 25% samples where EPH is $\geq 100$ mg/kg for TCL PAH	Same	VO+15 TICs <sup>3</sup> , SVO+15 TICs <sup>4</sup>	Same
<b>Kerosene</b>	VO+TICs <sup>3</sup> , Naphthalene, 2-Methyl Naphthalene	Same	VO+15 TICs <sup>3</sup> , SVO+15 TICs <sup>4</sup>	Same

\*As of 12/11/18, the requirement to run 1-methylnaphthalene has been removed

<sup>1</sup> Extractable Petroleum Hydrocarbons by NJ EPH Rev 3, 10/08

<sup>2</sup> Conduct the additional analyses on sample(s) with the highest EPH concentration(s), with a minimum of one sample.

<sup>3</sup> EPA TCL excluding 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, and 1,4 Dioxane plus 15 TICs

<sup>4</sup> EPA TCL excluding phenol and substituted phenols (BN analysis, not BNA) plus 15 TICs



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In addition to the standard lists offered (e.g. TCL VO, TCL BN, TCL PAH, Naphthalene & 2-Methylnaphthalene), IAL will offer **NEW** list names for Table 2-1 compliance (see full Table 2-1 in N.J.A.C. 7:26E), found below. These list names better streamline compliance with the existing Table 2-1 criteria and the August 2018 changes.

### Soil

- Volatiles (VO) – all include +15 TICs
  - TCL VO+15 minus EDB, DBCP, 1,4-Dioxane
  - NJ Unleaded Gasoline
  - NJ Leaded Gasoline

### Aqueous

- Volatiles (VO) – all include +15 TICs
  - NJ Fuel Oil #2
    - Note: Includes 1,2,4-Trimethylbenzene
  - TCL VO+15 minus EDB, DBCP, 1,4-Dioxane
  - NJ Unleaded Gasoline
  - NJ Leaded Gasoline
- Semi-Volatiles (SVO/BN)
  - NJ Fuel Oil #2 + SIM + 15
    - ~~Note: Includes 1-methylnaphthalene~~
  - TCL PAH + Acids + SIM (for MGP Sites)

\*As of 12/11/18, the requirement to run 1-methylnaphthalene has been removed

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### Summary of N.J.A.C. 7:26F – HOTS Rules

- Free product (Subchapter 3.2)
  - Must be removed within one year. Following removal, groundwater remediation must be conducted according to Subchapter 4.
- Soil (Subchapters 3.3 through 3.5)
  - Remediate until property meets the requirements for unrestricted (Subchapter 3.6) or residual contamination requirements (Subchapter 3.7)
  - Samples must be taken the same day of:
    - UST removal OR Above ground HOTS if there is a discharge from the tank or piping
  - Soil Remedial Action
    - Unrestricted Use (Subchapter 3.6) is implemented when:
      - No. 2 Heating Oil Discharge
        - EPH  $\leq$  1,000 mg/kg; or
        - The following conditions are met:
          - EPH  $>$ 1,000 mg/kg but  $\leq$  5,100 mg/kg;
          - No impacts to ecological receptors per Subchapter 6.4;
          - Naphthalene  $\leq$  6 mg/kg; and
          - The 2-Methyl Naphthalene concentration:
            - $\leq$  8 mg/kg; or
            - Soil is  $\leq$  230 mg/kg; and SPLP is  $\leq$  600  $\mu$ g/l.

### Summary of N.J.A.C. 7:26F – HOTS Rules (continued)

- No. 4 or No. 6 Heating Oil Discharge
  - EPH  $\leq$  100 mg/kg; or
  - The following conditions are met:
    - EPH >100 mg/kg but less than the EPH calculator value<sup>5</sup>;
    - No impacts to ecological receptors per Subchapter 6.4;
    - Each PAH compound is less than or equal to the stricter of Residential SRS or applicable site-specific IGW (N.J.A.C. 7:26D)
- Kerosene
  - The following conditions are met:
    - No impacts to ecological receptors per Subchapter 6.4;
    - Each VO compound is less than or equal to the stricter of Residential SRS or applicable site-specific IGW (N.J.A.C. 7:26D)
  - Residual Contamination (allowance to leave contamination in place), see Subchapter 3.7
- Groundwater (Subchapter 4)
  - Investigation required when:
    - Any portion of the HOTS is located within the seasonal high ground water table or within 2' of bedrock or groundwater; or
    - The HOTS discharge comes within 2' of bedrock or groundwater (GW)
  - GW Remedial Action
    - Analyze samples for the applicable parameters listed in Table 2-1; and compare results to the NJDEP GW Remediation Standards in N.J.A.C. 7:26D, based on class of water (e.g. Class IIA)
      - If any result is above GW Remediation Standards, collect 2 confirmation samples within 60 days of the initial sample and average the results.
        - If less than GW Remediation Standards, no further remediation of GW is necessary
        - If above, see Subchapters 4.3 and 6.2.
- Subchapter 5 details procedures for contamination not related to the HOTS under investigation

<sup>5</sup> [http://www.nj.gov/dep/srp/guidance/srra/eph\\_calculator.xls](http://www.nj.gov/dep/srp/guidance/srra/eph_calculator.xls)

### Summary of N.J.A.C. 7:26F – HOTS Rules (continued)

- Receptor Evaluation (Subchapter 6)
  - Vapor Intrusion (VI)
    - If free product is not remediated within 180 days of discharge discovery and GW concentrations exceed the VI GW Screening Levels<sup>6</sup>, then within 240 days, a VI investigation must be conducted per requirements in Subchapter 6.3 and the NJDEP VI Technical Guidance<sup>7</sup>
  - Ecological
    - Required when:
      - EPH is >1,700 mg/kg for a discharge from a HOTS containing No. 2, No. 4, or No. 6 heating oil
      - Any VO contaminant over the Residential SRS limit for a HOTS containing Kerosene
- Subchapter 7 details Remedial Action Report and HOTS NFA letter request requirements
  - Laboratory Deliverables
    - Reduced packages acceptable for all tests except VI and drinking water, which require reduced
    - NJDEP SRP Disk are required only for non-residential HOTS

The information contained within this memo is for information only. Please refer to N.J.A.C. 7:26F for detailed information.

Thank you for your continued use of IAL's services.

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<sup>6</sup> [www.nj.gov/dep/srp/guidance/vaporintrusion/index.html](http://www.nj.gov/dep/srp/guidance/vaporintrusion/index.html)

<sup>7</sup> [www.nj.gov/dep/srp/guidance/vaporintrusion/vig\\_main.pdf](http://www.nj.gov/dep/srp/guidance/vaporintrusion/vig_main.pdf)