# DEEPLogoCIRCLEBoldtextaroundcircleDepartment of Energy & Environmental Protection

**Bureau of Water Protection and Land Reuse  
Remediation Division**

FINAL FORM IV VERIFICATION (*Business)*

This verification must be signed by a Connecticut Licensed Environmental Professional and

the Certifying Party. Print or type unless otherwise noted. Retain a copy for your records.

( DEEP use only)

Ver#:

## Part I: Site Information

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| Establishment now or formerly known as:  Establishment Address:  City/Town:       State:    Zip Code:  Described in the Tax Assessor’s Office in the Town of:  as lot      , block       on map       Acreage of Establishment: |

**Part II: Verification**

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| This verification pertains to the Form IV filed with the Department on      and assigned **Rem#** **.**  If this Final Form IV Verification is being used to also close any Form III filed prior to the filing of the Form IV indicated above, list the applicable Rem #s:  Note →this verification will be rejected if erroneous entries are presented.  "I verify in accordance with Section 22a-134(23) of the Connecticut General Statutes and Section 22a-133v-1(z) of the Regulations of Connecticut State Agencies (RCSA), that the following has been completed in accordance with the Form IV previously filed with the Department.”  (check all that apply)  Compliance groundwater monitoring has been completed and the Groundwater Remediation Standards (RCSA Section 22a-133k-3) have been achieved.  Monitored Natural Attenuation groundwater monitoring has been completed and compliance with the Groundwater Remediation Standards (RCSA Section 22a-133k-3) have been achieved.  An environmental land use restriction (ELUR) has been executed and recorded in accordance with RCSA Section 22a-133q-1, and full compliance with the remediation standards Regulations has been achieved. | |
|  | LEP Seal |
| Signature of Licensed Environmental Professional License #: |
|  |
|  |
| Name of Licensed Environmental Professional (print or type) |
| Phone Number:  **Date of signature/verification**:  Email: |

**Rem#:**

Part III: Demonstration of Compliance

1. Significant Environmental Hazard

|  |  |
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| Was a significant hazard, as defined in §22a-6u identified? | Yes  No |
| Significant Hazard Notification filed? | Yes  No  N/A |
| What type(s) of hazard(s) were identified? | |
| Date of Commissioner’s Certification for Abatement: | |
| OR | |
| Date of Commissioner’s Memorandum of Resolution: | |

1. **Environmental Land Use Restriction**
2. The execution of an ELUR was not required pursuant to the subject Form IV. If checked, skip to [Part III. B [Monitored Natural Attenuation]](#partV).

**2**.  An ELUR was approved by the Commissioner and recorded on the land records after the filing of the subject Form IV to achieve compliance with the RSRs. Complete this table and the rest of Section A below.

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| **Criterion Exceeded** | | **COC** | | **Purpose of ELUR** | |
| PMC | |  | Non-chlorinated VOCs |  | Inaccessibility of polluted soil |
|  | GA |  | Chlorinated VOCs |  | Environmental Isolation of polluted soil |
|  | GB |  | Metals |  | Non-Residential land use |
| DEC | |  | PAHs |  | Non-residential use over plume |
|  | Res |  | SVOCs |  |  |
|  | I / C |  | PCBs |  |  |
| VolC | |  | Petroleum Hydrocarbons |  |  |
|  | |  | Pesticides / Herbicides |  |  |

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| **3. Documentation** | |
|  | This Final Form IV Verification Report (VR) documents and explains how the ELUR achieves compliance with the RSRs at each applicable release area. |

**Rem#:**

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| **4. Direct Exposure Criteria (DEC)** | | 22a-133k-2(a)1(A) and k-2(b) | | Applicable Release Area ID #’s |
|  | ELUR not required to achieve compliance with DEC | | | |
|  | Polluted soils ≤ Industrial/Commercial (I/C) DEC  (no PCBs and ELUR recorded) | | 22a-133k-2(b)(2)(A) |  |
| Date Certificate of Title for recordation of ELUR submitted to Commissioner:  🡪Copy of Certificate of Title page (with volume, page, and date recorded) must be attached to VR | | | |
|  | PCB polluted soil ≤ I/C DEC (electrical substation or other restricted access location and ELUR recorded) | | 22a-133k-2(b)(2)(B) |  |
| Date Certificate of Title for recordation of ELUR submitted to Commissioner:  🡪Copy of Certificate of Title page (with volume, page, and date recorded) must be attached to VR | | | |
|  | DEC not applicable – soil rendered inaccessible  (polluted soil <15ft bgs and ELUR recorded) | | 22a-133k-2(b)(3) |  |
| Date Certificate of Title for recordation of ELUR submitted to Commissioner:  🡪Copy of Certificate of Title page (with volume, page, and date recorded) must be attached to VR | | | |

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| **5. Pollutant Mobility Criteria** | | 22a-133k-2(a)1(B) and k-2(c) | | Applicable Release Area ID #’s |
|  | ELUR not required to achieve compliance with PMC | | | |
|  | PMC not applicable  (soils rendered environmentally isolated and ELUR recorded) | | 22a-133k-2(c)(4)(B) |  |
| Date Certificate of Title for recordation of ELUR submitted to Commissioner:  🡪Copy of Certificate of Title page (with volume, page, and date recorded) must be attached to VR | | | |

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| **6.** **Volatilization Criteria (VolC)** | | | 22a-133k-3(a)(1)(A) and k-3(c) | Release Area ID #’s or Site-Wide |
|  | ELUR not required to achieve compliance with VolC | | | |
|  | Groundwater polluted with VOCs ≤ I/C VolC (ELUR recorded) | | 22a-133k-3(c)(2) |  |
| Date Certificate of Title for recordation of ELUR submitted to Commissioner:  🡪Copy of Certificate of Title page (with volume, page, and date recorded) must be attached to VR | | | |
|  | Soil Gas Vapor Alternative | | 22a-133k-3(c)(3)(A) |  |
|  | Soil vapor ≤ Res VolC , **or** | (i) |  |
|  | Soil vapor ≤ I/C VolC (ELUR recorded) | (ii) |  |
| Date Certificate of Title for recordation of ELUR submitted to Commissioner:  🡪Copy of Certificate of Title page (with volume, page, and date recorded) must be attached to VR | | | |

**Rem#:**

**7. Financial Assurance**

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| A Commissioner-Approved EC requires a Financial Surety Mechanism.  Reminder: An annual status of the Financial Surety Mechanism is required to be submitted to DEEP. | |
|  | Not required |
|  | Required |
| Type of Financial Surety Mechanism established:  🡪Copy of the Financial Surety Mechanism must be attached to VR |
| Date Financial Surety Mechanism information submitted to Commissioner: |

1. **Monitored Natural Attenuation (MNA)**

1. MNA groundwater monitoring was not required pursuant to the subject Form IV. If checked, skip to [Part III. C. [Application of Groundwater Remediation Standards]](#partVB).

**2**.  Substances in groundwater had exceeded criteria, and monitored natural attenuation of a groundwater plume was completed pursuant to the filing of the subject Form IV. Complete this table and the rest of this Verification Form.

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| **Criterion Exceeded** | | **COC** | | **Compliance Measure** | |
|  | GWPC |  | Chlorinated VOCs |  | Groundwater Compliance monitoring |
|  | SWPC |  | Metals |  | Commissioner approval of Technical Impracticability |
|  |  |  | PAHs |  |  |
|  | |  | SVOCs |  |  |
|  |  |  | PCBs |  |  |
|  | |  | Petroleum Hydrocarbons |  |  |
|  |  |  | Pesticides / Herbicides |  |  |

1. **Application of Groundwater Remediation Standards**
2. Groundwater compliance monitoring was not required pursuant to the subject Form IV.

[The execution of an ELUR was the only outstanding requirement upon filing the subject Form IV.]

If checked, skip to [Part IV. [Certification]](#partIV).

2.  Groundwater compliance monitoring was completed after the filing of the Form IV, complete the rest of this Verification Form.

*In order to validate the application of the Groundwater Remediation Standards,* ***all*** *subsections of D.3 and 4 below are expected to be completed.*

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| **3.**  **Application of** **Groundwater Remediation Standards** | | RCSA 22a-133k-3 |
|  | All plumes have been investigated in accordance with prevailing standards and guidelines, including the SCGD or equal alternative approach. | |
|  | A sufficient quantity and quality of groundwater data has been collected to understand seasonal and dimensional groundwater conditions. | |
|  | Groundwater monitoring has been completed in accordance with 22a-133k-3(g). | |

**Rem#:**

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| **3.** **Application of** **Groundwater Remediation Standards (continued)** | | | | RCSA 22a-133k-3 | |
|  | Groundwater monitoring was completed to determine the following: (mark all appropriate boxes below) | | | | |
|  |  | The effectiveness of any soil remediation to prevent the pollution of groundwater from RA | | | 3(g)(1)(A) |
|  |  | Not applicable. Remediation of soil was not necessary | | |
|  | The effectiveness of any measures to render soil environmentally isolated | | | 3(g)(1)(B) |
|  |  | Not applicable. | | |
|  | The effectiveness of any remediation taken to eliminate or minimize risks associated with release, or risks identified in a risk assessment | | | 3(g)(1)(C) |
|  |  | Not applicable. No remediation of environmental media was conducted | | |
|  | That all substances in groundwater in a GA or aquifer protection area meet Background or GWPC, as applicable | | | 3(g)(1)(D) |
|  |  | Not applicable. Groundwater in a GB area and not in aquifer protection area | | |
|  | That all substances in groundwater meet SWPC and applicable VolC | | | 3(g)(1)(E) |
|  | If a plume in GB area interferes with any existing uses of groundwater for a drinking water supply or any other existing uses, including but not limited to industrial, commercial or agricultural uses | | | 3(g)(1)(F) |
|  |  | Not applicable. Groundwater is in a GA area | | |
|  | **The VR documents and explains how the Groundwater Remediation Standards were achieved for each plume.** | | | | |

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| **4. Compliance with Criteria for Groundwater** | | | | | 22a-133k-3(g)(2)(A) |
|  | Compliance samples were collected after: (i) | | | | |
|  |  | All remedial actions to achieve compliance with PMC and GWPC were complete (i) (I) | | | |
|  | No transient effects on hydraulic head (i) (II) | | | |
|  | Any changes to geochemistry stabilized and equilibrium conditions were established, AND (i) (III) | | | |
|  | The concentrations of substances at each sampling location that represents the extent and degree of the plume were not increasing over time (except for natural attenuation or seasonal variation) (i) (IV) | | | |
|  | Compliance samples were collected during 4 sampling events that reflect seasonal variability (ii) | | | | |
|  |  | Completed in 1 year | | | |
|  | Completed in 2 years | | | |
|  | A substance was detected in any one seasonal quarter > criteria | | | | |
|  | Explained in VR, Section      , page      . | | | |
|  | Alternative Means to Demonstrate Compliance (Commissioner approval) | | 22a-133k-3(g)(2)(iii) | Release Area (RA) ID #’s or Site-Wide | |
| Approval date(s): | |  | |
| 🡪Copy(s) of Approval(s) must be attached to VR | | |

**Rem#:**

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| **4a. Groundwater Compliance not applicable – Incidental Sources** 22a-133k-3(f) | | | Release Area (RA) ID #’s or Site-Wide |
|  | Trihalomethanes resulting from releases of drinking water from public water supply system, or | |  |
|  | Metals, petroleum hydrocarbons, or semi-volatile substances, provided such pollution is due to: | | |
|  | Incidental release due to normal operation of motor vehicles |  |
|  | A result of normal paving and maintenance of pavement |  |

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| **5. Background Groundwater Quality** | | 22a-133k-3(a)(1)(B) and k-3(a)(2) | | Release Area (RA) ID #’s or Site-Wide |
|  | Groundwater in GA area meets Background Groundwater Quality | | 22a-133k-3(a)(2) |  |
|  | Background Water Quality not required  (see 4a. below) | | 22a-133k-3(d) |  |
|  | Exemption from Background due to Technical Impracticability | | 22a-133k-3(e)(1) |  |

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| **6. Compliance with Background** | | | 22a-133k-3(g)(2)(B) | | Release Area (RA) ID #’s or Site-Wide |
|  | Sampling locations are representative of plume, **and** | | | | |
|  |  | Analytical results ≤ Background concentration for groundwater **OR** | | (i) |  |
|  | 12 consecutive monthly samples from each sampling location are ≤ 95% UCL | | (ii) |  |

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| **6a. Compliance with Background not Required** | | | | 22a-133k-3(d)(1) or (d)(2) | | Release Area (RA) ID #’s or Site-Wide |
|  | GWPC, not Background, is applicable at site  *(****All of the following must apply****)* | | | | 22a-133k-3(d)(1) |  |
|  |  | | The background concentration is ≤ GWPC; | | | |
|  | | A public water distribution system is available within 200 feet of the subject parcel, parcels adjacent thereto, and any parcel within the areal extent of the plume; | | | |
|  | | Such plume is not located in an Aquifer Protection Area; **AND** | | | |
|  | | Such plume is not located within the area of influence of any public water supply well. | | | |
|  | Groundwater remediation to Background not required  ***(All of the following must apply)*** | | | | 22a-133k-3(d)(2) |  |
|  |  | All substances in plume ≤ GWPC prior to remediation | | | | |
|  | The areal extent of the plume that exceeds applicable criteria is not increasing over time, | | | | |
|  | The concentration of substances is not increasing over time, | | | | |

**Rem#:**

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| **7. Groundwater Protection Criteria (GWPC)** | | 22a-133k-3(a)(2)(A) and k-3(d) | | Release Area (RA) ID #’s or Site-Wide |
|  | Groundwater in GA area remediated to GWPC | | 22a-133k-3(d)(1) |  |
|  | Groundwater in GB area remediated to GWPC  (groundwater used for drinking or other domestic purposes) | | 22a-133k-3(d)(3) |  |
|  | Additional Polluting Substance (Commissioner approval)  Approval date(s): | | 22a-133k-3(h) |  |
| 🡪Copy(s) of Approval(s) must be attached to VR | |

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| **8. Compliance with GWPC** | | | 22a-133k-3(g)(2)(B) | | Release Area (RA) ID #’s or Site-Wide |
|  | Sampling locations are representative of plume, **and** | | | | |
|  |  | analytical results ≤ GWPC for groundwater **OR** | | (i) |  |
|  | 95% UCL of arithmetic mean of all samples representing plume for 12 consecutive monthly samples is ≤ applicable criteria | | (ii) |  |

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| **9. Surface Water Protection Criteria (SWPC)** | | 22a-133k-3(a)(1)(A) and k-3(b) | | Release Area (RA) ID #’s or Site-Wide |
|  | Groundwater ≤ SWPC (remediation not required) | | |  |
|  | Groundwater remediated to SWPC, **or** if required: **↓** | | 22a-133k-3(b)(1) |  |
|  | Groundwater remediated to Appendix D of Water Quality Standards | | 22a-133k-3(b)(2) |  |

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| **10. Compliance with SWPC** | | | 22a-133k-3(g)(2)I | | Release Area (RA) ID #’s or Site-Wide | |
|  | Alternative SWPC used  (of substance listed in Appendix D, WQS) | | 22a-133k-3(b)(3)(A) | |  | |
|  | Alternative SWPC (Commissioner approval)  Approval date(s): | | 22a-133k-3(b)(3)(B) | |  | |
| 🡪Copy(s) of Approval(s) must be attached to VR | | | |
|  | Sampling locations are representative of plume, **and ↓** | | | | | |
|  |  | 95% UCL of all samples representing plume is ≤ applicable criteria, **or** | | (i) | |  |
|  | Discharge point of plume ≤ SWPC | | (ii) | |  |

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| **11. Volatilization Criteria (VolC)** 22a-133k-3(a)(1)(A) and k-3(c) | | | | | | | | Release Area (RA) ID #’s or Site-Wide |
|  | Groundwater polluted with VOCs ≤ Residential VolC | | | | | 22a-133k-3(c)(1) | |  |
|  | Groundwater polluted with VOCs ≤ I/C VolC (ELUR recorded) | | | | | 22a-133k-3(c)(2) | |  |
| Date Certificate of Title for recordation of ELUR submitted to Commissioner: | | | | | | | |
|  | | 🡪Copy of Certificate of Title page (with volume, page, and date recorded) must be attached to VR | | | | | |
|  | Soil Gas Vapor Alternative | | | | | 22a-133k-3(c)(3)(A) | |  |
|  |  | Soil vapor ≤ Res VolC , **or** | | | | (i) | |  |
|  | Soil vapor ≤ I/C VolC (ELUR recorded) | | | | (ii) | |  |
| Date Certificate of Title for recordation of ELUR submitted to Commissioner: | | | | | | | |
|  | | 🡪Copy of Certificate of Title page (with volume, page, and date recorded) must be attached to VR | | | | | |
|  | Site-specific and Alternative VolC (Commissioner approval)  Approval date(s): | | | | | 22a-133k-3(c)(4) |  | |
| 🡪Copy(s) of Approval(s) must be attached to VR | | |
|  | **VolC exempt** (**all ↓ sub-requirements are applicable**) | | | | | 22a-133k-3(c)(5) | |  |
|  | No buildings, plus best efforts to have all property owners to record ELUR | | | | (A)(i) | |  |
|  | Dates of Certificate of Titles for recordation of ELURs submitted to Commissioner: | | | | | | |
|  | | 🡪Copy of Certificate of Title page (with volume, page, and date recorded) must be attached to VR | | | | |
| **🡪 If all property owners did not consent to ELUR, documentation of Best Efforts must be attached to VR** | | | | | | |
| **OR** | | | | | | | |
|  | No buildings can reasonably be built over plume or VOCs ≤ VolC within 5 years (Commissioner approval) Approval date(s): | | | | (A)(ii) | |  |
| 🡪Copy(s) of Approval(s) must be attached to VR | | |
|  | Building exists, but Indoor Air Monitoring (Commissioner approval) Approval date(s): | | | | (B) | |  |
| 🡪Copy(s) of Approval(s) must be attached to VR | | |
|  | **VolC not applicable** (**all ↓ sub-requirements are applicable**) | | | | 22a-133k-3(c)(3)(B) | | |  |
|  |  | Measures acceptable to Commissioner have been taken to prevent migration of vapors into any overlying building; | | | | | | |
|  | A program is implemented to monitor and maintain all such measures; and | | | | | | |
|  | Notice of such measures have been submitted to Commissioner on the prescribed form | | | | | | |
| Date Notice submitted to Commissioner: | | | | | | |
|  | **VolC not applicable** | | | | 22a-133k-3(c)(1) | | |  |
|  |  | VOCs not detected in groundwater | | | | | | |
|  | VOCs detected in groundwater, but seasonally high water table is 15 feet or greater beneath ground surface or building | | | | | | |

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| **12. Compliance with VolC** | | | 22a-133k-3(g)(2)(D) | | Release Area (RA) ID #’s or Site-Wide |
|  | Compliance with VolC in Groundwater | | | (i) |  |
|  |  | Sampling locations are representative of plume, **and** | | | |
|  | Analytical results ≤ applicable VolC, as determined by 22a-133k-3(c) | | | |
| **OR** | | | | | |
|  | Compliance with VolC in Soil Vapor | | | (ii) |  |
|  |  | Sampling locations and frequency are representative of soil vapor, including seasonal variability, **and** | | | |
|  | Analytical results ≤ applicable VolC | | | |

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| **13. Other Provisions** | | | | Release Area (RA) ID #’s or Site-Wide |
|  | Application of DEEP “Policy on Up-Gradient Contamination” (8/28/97) | | [Policy on Upgradient Contamination](http://www.ct.gov/dep/cwp/view.asp?a=2715&q=324960&depNav_GID=1626) |  |
|  | Variance of groundwater remediation due to Technical Impracticability (Commissioner approval)  Approval date(s): | | 22a-133k-3(e)(2) |  |
| 🡪Copy(s) of Approval(s) must be attached to VR | |
| Date Certificate of Title for recordation of ELUR submitted to Commissioner: | | | |
|  | 🡪Copy of Certificate of Title page (with volume, page, and date recorded) must be attached to VR | | |

**Rem#:**

**Part IV: Certifying Party Certification**

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| "In accordance with Section 22a-134(13) and Section 22a-134a(c) of the CGS, I submit this Final Form IV Verification signed and sealed by a licensed environmental professional (LEP), and the attached Final Form IV Verification Report, which has been approved in writing by a LEP, and other applicable documentation."  “I understand that this final compliance verification is being applied to the remediation of releases associated with business operations as of:  **Check the one applicable box below (the applicable date indicated below must be the same date indicated on the Form IV Supporting Verification).**  The Date the Form IV was filed on  The Date the Phase II Investigation was completed on  The Date the LEP signed and sealed the Form IV Supporting Verification on  and that this Final Form IV Verification does not attest to any release that may have occurred at the property not associated with business operations or to any releases associated with business operations subsequent to the applicable date of the verification indicated above.” | | |
|  |  |  |
| Printed Name of Signatory for Certifying Party |  | Title |
|  |  |  |
| Authorized Signature for Certifying Party |  | Date |
| Certifying Party:  Address:  City/Town:       State:    Zip Code:  Phone:  e-mail: | | |

This completed form should be submitted to: REMEDIATION DIVISION, 2nd FLOOR

BUREAU OF WATER PROTECTION AND LAND REUSE

DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION

79 ELM STREET

HARTFORD, CT 06106-5127