



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC107A

NUMERICAL RANKING SYSTEM (NRS) SCORESHEET

Pursuant to 310 CMR 40.1511 (Subpart O)

Release Tracking Number

1

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15718

A. NRS SCORESHEET SUMMARY SECTION:

1. Classification Submittal: (check one) ☐ a. Initial NRS Score ☒ b. Revised NRS Score

2. Disposal Site Score:

II	III	IV	V	VI	Total
145	58	25	115	0	343

3. Disposal Site Classification: (check one)

☐ a. Tier IA ☐ b. Tier IB ☐ c. Tier IC ☒ d. Tier II

B. DISPOSAL SITE INFORMATION (NRS SECTION I):

1. UTM Coordinates: a. UTM N: 5313249 b. UTM E: 301780

2. Check which, if any, of the Tier I inclusionary criteria are met by the Disposal Site, pursuant to 310 CMR 40.0520(2):

- ☐ a. Groundwater is located within an Interim Wellhead Protection Area or a Zone II, and there is evidence of groundwater contamination by an Oil or Hazardous Material at the time of Tier Classification at concentrations equal to or exceeding the applicable RCGW-1 Reportable Concentration set forth in 310 CMR 40.0360.
- ☐ b. An Imminent Hazard is present at the time of Tier Classification.

C. EXPOSURE PATHWAYS (NRS SECTION II):

1. Exposure Pathways, and Oil and Hazardous Material (OHM) Sources:

For A. through D., score according to 310 CMR 40.1512 - Exposure Pathway Designation Criteria and NRS Table II.
For E., score using NRS Table II.E.

	Score
A. Soil (includes sediment)	100
B. Groundwater	20
C. Surface Water (includes wetlands)	0
D. Air	0
E. Number of OHM Sources	25
Total NRS Section II Score (15 - 700)	145

2. Was Section G (NRS Section VI) used to amend the score for this Section of the NRS?

☐

a. Yes

☒

b. No



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3. Summary Rationale for Exposure Pathway Values, A. through D., and Phase I Report References:

PCB CONCENTRATIONS WERE IDENTIFIED WITHIN THE TOP 1 FOOT OF SURFACE SOIL ABOVE RCS-1 REPORTABLE CONCENTRATIONS FOR SOIL IN AN UNPAVED, VACANT AND UNDEVELOPED PARCEL ABUTTING THE GASOLINE STATION. VOLATILE PETROLEUM HYDROCARBONS (VPH) WAS DETECTED IN GROUNDWATER AT CONCENTRATIONS ABOVE APPLICABLE METHOD 1 RISK CHARACTERIZATION STANDARDS IN 2007. PCBs WERE NOT DETECTED IN SOIL SAMPLES COLLECTED NEAR THE GROUNDWATER TABLE. LEVEL 1 SOIL GAS SURVEY PERFORMED IN 2009 CONFIRMS THAT NO INDOOR AIR PATHWAY EXISTS. NO DETECTABLE CONCENTRATIONS OF GASOLINE-RELATED COMPOUNDS (VPH) ARE DETECTED IN DOWNGRAIDENT MONITORING WELLS, THEREFORE, NO IMPACTS TO SURFACE WATER ARE LIKELY.

D. DISPOSAL SITE CHARACTERISTICS (NRS SECTION III):

1. Oil and Hazardous Material (OHM) Toxicity Score (NRS Section III.A.):

a. List the Four Highest OHM Toxicity Scores from NRS Table III.A.:

OHM Scored	Concentration and Media	Toxicity Score (1 - 80)
POLYCHLORINATED BIPHENYLS	SOIL	30
C5-C8 ALIPHATICS(VPH)	SOIL	25
C9-C10 AROMATICS(VPH)	SOIL	25
XYLENES	SOIL	10

b. Score using NRS Worksheet III.A.1. to determine the OHM Toxicity Score for OHM not listed in NRS Table III.A.:

OHM	Human Health-based Toxicity Value	Concentration (Soil - ug/g)	Concentration (Water - ug/l)	Toxicity Score

c. Use the Highest OHM Toxicity Score from either NRS Table III.A. or Worksheet III.A.1.:

OHM Scored	Toxicity Score
POLYCHLORINATED BIPHENYLS	30



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2. Multiple OHMs (NRS Section III.B.):

Was the Toxicity Score of more than one OHM greater than or equal to 30? ☐ a. Yes (30) ☒ b. No (0)

3. OHM Mobility and Persistence (NRS Section III.C.):

Score according to 310 CMR 40.1514 - OHM Mobility and Persistence

a. OHM Scored	b. Score (0 - 50)
POLYCHLORINATED BIPHENYLS	20

4. Disposal Site Hydrogeology (NRS Section III.D.):

Score according to 310 CMR 40.1515 - Soil Permeability, and NRS Table III.D.

Site Hydrogeology Score (2-20)
8

5. Total NRS Section III Score:

A.	B.	C.	D.	Total for Section III (3 - 180)
30	0	20	8	58

6. Was Section G (NRS Section VI) used to amend the score for this Section of the NRS? ☐ a. Yes ☒ b. No

E. HUMAN POPULATION AND LAND USES (NRS SECTION IV):

1. Human Population (NRS Section IV.A.):

Score using NRS Table IV.A.

Residential Population within 1/2 Mile	Institutions within 500 Feet	On-site Workers	Population Score (0 - 40)
10	0	5	15

2. Aquifers (NRS Section IV.B.):

a. Sole Source Aquifer: ☐ i. Yes (25) ii. Name: _____ ☒ iii. No (0)

b. Potentially Productive Aquifer: ☐ i. Medium or High (15) ☒ ii. No (0)

3. Water Use (NRS Section IV.C.):

Score using NRS Table IV.C.

Proximity to Public Drinking Water Source	Persons Served by Public Drinking Water Supply	Private Water Supplies within 500 Feet	Alternate Public Water Supply Available	Water Use Score (0 -125)
0	10	0	0	10

4. Total NRS Section IV Score:

A.	B.	C.	Total for Section IV (0 - 205)
15	0	10	25

5. Was Section G (NRS Section VI) used to amend the score for this Section of the NRS? ☐ a. Yes ☒ b. No



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F. ECOLOGICAL POPULATION (NRS SECTION V):

1. Environmental Resource Areas (NRS Section V.A.): Score using NRS Table V.A.

Area of Critical Environmental Concern	Species of Special Concern, Threatened or Endangered Species Habitat	Wetlands, Certified Vernal Pool, or Outstanding Resource Water	Fish Habitat	Protected Open Space	Environmental Resource Area Score (0 - 150)
0	30	20	20	20	90

2. Environmental Toxicity Score (NRS Section V.B.):

Score only if Environmental Resource Area Score is greater than or equal to 30.

a. List the Three Highest Environmental Toxicity Scores from NRS Table V.B.:

OHM Scored	Concentration and Media	Toxicity Score (0 - 35)
POLYCHLORINATED BIPHENYLS	248 MG/KG IN SOIL	25
C5-C8 ALIPHATICS	1870 MG/KG IN SOIL	15
C9-C10 AROMATICS	1650 MG/KG IN SOIL	15

b. Score using NRS Worksheet V.B.1. to determine the Environmental Toxicity Score for OHM not listed in NRS Table V.B. See 310 CMR 40.1516 for Environmental Toxicity Values for each OHM.

OHM	Environmental Toxicity Value	Concentration (Soil - ug/g)	Concentration (Water - ug/l)	Environmental Toxicity Score

c. Use the Highest Environmental Toxicity Score from either NRS Table V.B. or from Worksheet V.B.1.:

OHM Scored	Toxicity Score
POLYCHLORINATED BIPHENYLS	25

3. Total NRS Section V Score:

A.	B.	Total for Section V (0 - 185)
90	25	115

4. Was Section G (NRS Section VI) used to amend the score for this Section of the NRS? ☐ a. Yes ☒ b. No



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G. MITIGATING DISPOSAL SITE -SPECIFIC CONDITIONS (NRS SECTION VI):

1. Disposal site-specific conditions that warrant amending the site score. Changes directly related to NRS Sections or Subsection scores may not reduce the score more than the relevant subsection value assigned for the disposal site in that subsection. Section VI must reference specific pages of the Phase I. Section VI may not exceed plus or minus 50 points and may be scored only in 5-point increments.

THERE ARE NO SITE-SPECIFIC CONDITIONS THAT WARRANT AMENDING THE SITE SCORE.

☐ 2. Check here if additional pages are provided in an attachment.

3. Disposal Site Amendment (Not to exceed plus or minus 50 points):

**Total Score
Section VI**

0