

CHAPTER Env-Or 600 CONTAMINATED SITE MANAGEMENT

Statutory Authority: RSA 146-A:11-c, IV, V, & V-a; RSA 146-C:9, X & XI; RSA 147-A:3, VII; RSA 147-F:18, I(b) & (h); RSA 485:3-b, I; RSA 485-C:4, III, VIII, IX, & X; RSA 541-A:16, I(b)

REVISION NOTE:

Document #8812, effective 2-1-07, readopted with amendments and redesignated former Chapter Env-Wm 1600 titled Standards for Reporting and Remediation of Oil Discharges as Env-Or 600 pursuant to a rules reorganization plan for Department rules approved by the Director of the Office of Legislative Services on 9-7-05.

The prior filings for former Env-Wm 1600 include the following document:

#8198, eff 11-3-04

PART Env-Or 601 PURPOSE AND APPLICABILITY

Env-Or 601.01 Purpose. The purpose of these rules is to establish:

(a) Procedures and requirements for the investigation, management, and remediation of contamination from the discharge of regulated contaminants that adversely affect human health or the environment resulting from human operations or activities;

(b) Procedures to obtain a groundwater management permit as required by RSA 485-C;

(c) Procedures to restrict future property use pursuant to RSA 147-F:15;

(d) Procedures and requirements for notification of, and emergency and initial response actions in response to, a discharge of a regulated contaminant; and

(e) Procedures for determining fees for expedited reviews of environmental site assessment reports pursuant to RSA 485:3-b, I.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #9213, eff 7-23-08; ss by #10831, eff 6-1-15

Env-Or 601.02 Applicability. This chapter shall apply to:

(a) All environmental investigations and remediation of discharges of regulated contaminants identified in this chapter, including oil, whether conducted pursuant to RSA 146-A, RSA 146-C, RSA 147-A, RSA 147-B, RSA 147-F, or RSA 485-C;

(b) Groundwater management zones and groundwater management permits;

(c) The procedures for the notification of discharges of regulated contaminants identified in this chapter, including oil;

(d) Emergency and initial response actions conducted in response to a discharge of any regulated contaminant identified in this chapter, including oil; and

- (e) Requests for expedited review of environmental site assessment reports pursuant to RSA 485:3-b, I.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #9213, eff 7-23-08; ss by #10831, eff 6-1-15

#### PART Env-Or 602 DEFINITIONS

Env-Or 602.01 “Activity and use restriction (AUR)” means controls imposed at a site, to achieve or maintain a condition that is protective of human health and the environment, which is recorded in the registry of deeds for the county in which the site is located.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 602.02 “Ambient groundwater quality standards (AGQS)” means “ambient groundwater quality standards” as defined in RSA 485-C:2, I, as reprinted in Appendix C.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 602.03 “Background” means the concentration of a chemical in the environment that would exist at a site in the absence of a discharge, including chemicals that are ubiquitous and consistently present at or in the vicinity of the site such as:

- (a) Coal or wood ash associated with fill material;
- (b) Petroleum residues that are incidental to the normal operation of motor vehicles;
- (c) Asphalt pavement and petroleum compounds contained in associated sub-base materials;
- (d) Fertilizers that were applied in a manner consistent with their labeling; and
- (e) Pesticides that were applied in a manner consistent with their labeling.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 602.04 “Certificate of completion” means a certificate issued by the department which certifies that:

- (a) The activities specified in an approved remedial action have been completed;
- (b) Any necessary activity and use restrictions have been implemented;
- (c) Any monitoring requirements are being met; and
- (d) All fees and costs due under RSA 146-A, RSA 146-C, RSA 147-A, RSA 147-B, and RSA 147-F have been paid.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 602.05 “Certificate of no further action” means a certificate issued by the department which certifies that:

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- (a) No further investigation, remediation, or other actions are required;
- (b) Any necessary activity and use restrictions have been implemented;
- (c) Any monitoring requirements necessary to implement an activity and use restriction are being met;  
and
- (d) All fees and costs due under RSA 146-A, RSA 146-C, RSA 147-A, RSA 147-B, and RSA 147-F have been paid.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 602.06 “Chemical Abstract Service Number (CAS No.)” means the unique identification number assigned to a particular chemical substance by the Chemical Abstract Registry of the American Chemical Society.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 602.07 “Contamination” means the presence of any regulated contaminant, as defined herein, other than naturally occurring substances at naturally occurring or background levels, in soil, groundwater, soil gas, air, sediment, surface water, construction/excavation debris, or any other material at a concentration that has the potential to adversely affect human health or the environment.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 602.08 “Department” means the New Hampshire department of environmental services.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 602.09 “Discharge” means the release or addition of any regulated contaminant to land, groundwater, or surface water.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 602.10 “Engineer of record” means “engineer of record” as defined in RSA 310-A:2, III, as reprinted in Appendix C.

Source. #10831, eff 6-1-15

Env-Or 602.11 “Groundwater” means “groundwater” as defined in RSA 485-C:2, VIII, as reprinted in Appendix C.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.10)

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Env-Or 602.12 “Groundwater contamination” means a violation of the groundwater quality criteria specified in Env-Or 603.01.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.11)

Env-Or 602.13 “Groundwater management permit” means a permit issued pursuant to RSA 485-C:4, VIII and Env-Or 607 to a site owner or responsible party to establish a groundwater management zone, manage the use of contaminated groundwater, and monitor remedial progress.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.12)

Env-Or 602.14 “Groundwater management zone (GMZ)” means:

(a) Subject to (b), below, the subsurface volume in which groundwater contamination associated with a discharge is contained; or

(b) For unlined solid waste landfills with no groundwater contamination, the subsurface volume beneath the area delineated by the property boundary.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.13)

Env-Or 602.15 “Initial site characterization” means a preliminary assessment following a discharge that is performed to collect information regarding the subsurface conditions of a site, the extent of the discharge, and potential receptors in the area.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.14)

Env-Or 602.16 “Natural attenuation” means a reduction in the mass, toxicity, mobility, volume, or concentration of contaminants by physical, chemical, or biological processes without human intervention.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.12) (from Env-Or 602.15)

Env-Or 602.17 “Non-aqueous phase liquid (NAPL)” means a liquid, containing any contaminant, that is immiscible or only partially miscible in water and exists as a separate phase.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.16)

Env-Or 602.18 “Oil” means “oil” as defined in RSA 146-A:2, III, as reprinted in Appendix C.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.17)

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Env-Or 602.19 “Person” means any individual, partnership, company, public or private corporation, political subdivision or agency of the state, department, agency or instrumentality of the United States of America, or any other legal entity.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.18)

Env-Or 602.20 “Point of contact (POC)” means a person designated by a group of responsible parties to file reports and receive notices on behalf of all of the responsible parties.

Source. #10831, eff 6-1-15

Env-Or 602.21 “Potential receptor” means a living organism or an environmental medium that is in the pathway of contamination from a discharge.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.19)

Env-Or 602.22 “Potentiometric surface map” means a map of the hydraulic head in an aquifer.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.20)

Env-Or 602.23 “Presumptive remedy” means a technology or process used to remediate a particular type of contamination, which in other applications has been cost-effective based on historical performance data for sites with similar hydrogeological characteristics and is protective of human health and the environment.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.21)

Env-Or 602.24 “Professional of record” means the professional engineer or professional geologist licensed under RSA 310-A who is responsible for the documents.

Source. #10831, eff 6-1-15

Env-Or 602.25 “Receptor” means a living organism or an environmental medium that is exposed to contamination from a discharge.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.22)

Env-Or 602.26 “Regulated contaminant” means “regulated contaminant” as defined in RSA 485-C:2, XIII, as reprinted in Appendix C.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.23)

Env-Or 602.27 “Remedial action” means any measure or combination of measures that will, when implemented, ensure attainment of a level of control of contaminants such that no contaminant will adversely affect human health or the environment.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.24)

Env-Or 602.28 “Remedial action plan” means proposed actions to:

- (a) Remove, treat, or contain contamination sources;
- (b) Mitigate indoor air contamination;
- (c) Contain contaminated groundwater within the limits of a groundwater management zone;
- (d) Restore groundwater quality to meet groundwater quality criteria of Env-Or 603.01; and
- (e) Restore soil quality to meet soil remediation criteria of Env-Or 606.19.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.25)

Env-Or 602.29 “Responsible party” means any person subject to the strict liability provisions of RSA 146-A:3-a, RSA 147-A:9, RSA 146-C:11, or RSA 147-B:10. For any site where there is more than one responsible party, the term includes all responsible parties or the point of contact, as applicable from the context of the rule where the term is used.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.26)

Env-Or 602.30 “Signature” means the name, mark, symbol, sound, or digital or electronic logical association affixed to a record to attest to its validity.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.27)

Env-Or 602.31 “Site” means a place or location where a discharge is known or suspected to have occurred and includes the full extent of contamination resulting from the discharge.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.28)

Env-Or 602.32 “Site investigation” means an investigation of a discharge at a site and the off-site surrounding area, that is performed to determine the location and full extent of contamination and identify receptors and potential receptors.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.29)

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Env-Or 602.33 “Soil” means any unconsolidated material above bedrock, regardless of particle size, produced by the physical and chemical disintegration of bedrock and that might contain organic matter. Soil does not include sediment found in surface water.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.30)

Env-Or 602.34 “Surface water” means “surface water” as defined in RSA 146-A:2, VI-b, as reprinted in Appendix C.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.31)

Env-Or 602.35 “Water supply well” means a well that serves as a drinking water supply, including any well serving a public water system as defined in RSA 485:1-a, XV.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.32)

Env-Or 602.36 “Writing” means any intentional reduction to tangible form including letters, words, or numbers, or their equivalent, set down by handwriting, typewriting, photostating, photographing, magnetic impulse, mechanical or electrical recording, or other form of data compilation.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 602.33)

PART Env-Or 603 GROUNDWATER QUALITY CRITERIA

Env-Or 603.01 Groundwater Quality Criteria. Unless exempt under Env-Or 603.02, the following criteria shall apply to all groundwaters of the state:

- (a) Groundwater shall be suitable for use as drinking water without treatment;
- (b) Groundwater shall not contain any regulated contaminant at a concentration greater than the ambient groundwater quality standards in Env-Or 603.03; and
- (c) Groundwater shall not contain any regulated contaminant at a concentration such that the natural discharge of that groundwater to surface water will cause a violation of a surface water quality standard established in Env-Wq 1700.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 603.02 Exemptions to Groundwater Quality Criteria. Groundwater quality shall be exempt from the groundwater quality criteria of Env-Or 603.01 if:

- (a) The groundwater is within a groundwater discharge zone permitted in accordance with Env-Wq 402;
- (b) The groundwater is within a groundwater management zone permitted in accordance with Env-Or 607;

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(c) The groundwater is contaminated solely with salt and other de-icing chemicals applied for winter road maintenance;

(d) The groundwater contamination resulted from backwash from a public water treatment facility that is subject to Env-Wq 402; or

(e) The groundwater contamination is not the result of human operations or activities.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 603.03 Ambient Groundwater Quality Standards (AGQS).

(a) Pursuant to RSA 485-C:6, ambient groundwater quality standards (AGQS) shall apply to all regulated contaminants that result from human operations or activities.

(b) The following shall apply to Table 600-1, below:

(1) The standard for total trihalomethanes, namely bromoform, bromodichloromethane, dibromochloromethane, and trichloromethane (chloroform), shall be 80 micrograms per liter ( $\mu\text{g/L}$ ) if the groundwater is contaminated by chlorinated water supplies;

(2) Positives for total coliform shall be confirmed by the presence of other wastewater parameters, such as fecal coliform, Escherichia coli, fecal streptococcus, nitrates, and chlorides;

(3) Unless otherwise noted, concentrations shall be measured in micrograms per liter ( $\mu\text{g/L}$ ), which is equivalent to parts per billion (ppb); and

(4) Gross alpha radionuclides, radium 226 and 228, strontium 90, and tritium shall be measured in picocuries per liter (pCi/L).

(c) AGQS shall be as set forth in Table 600-1 below:

Table 600-1 AMBIENT GROUNDWATER QUALITY STANDARDS		
Chemical Name	CAS No.	AGQS $\mu\text{g/L}$ (ppb)
Acenaphthene	83-32-9	420
Acenaphthylene	208-96-8	420
Acetone	67-64-1	6,000
Acrylonitrile	107-13-1	5
Alachor	15972-60-8	2
Aldicarb	116-06-3	7
Aldicarb sulfone	1646-88-4	7
Aldicarb sulfoxide	1646-87-3	7
Aldrin	309-00-2	0.1
Allyl chloride	107-05-1	7.4
Anthracene	120-12-7	2,100
Antimony	7440-36-0	6
Arsenic, through June 30, 2021	7440-38-2	10
Arsenic, as of July 1, 2021	7440-38-2	5



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Table 600-1 AMBIENT GROUNDWATER QUALITY STANDARDS		
Chemical Name	CAS No.	AGQS µg/L (ppb)
Atrazine	1912-24-9	3
Barium	7440-39-3	2,000
Benzene	71-43-2	5
Benzidine	92-87-5	0.8
Benzo(a)anthracene	56-55-3	0.1
Benzo(a)pyrene	50-32-8	0.2
Benzo(b)fluoranthene	205-99-2	0.1
Benzo(g,h,i)perylene	191-24-2	210
Benzoic Acid	65-85-0	28,000
Benzo(k)fluoranthene	207-08-9	0.5
Beryllium	7440-41-7	4
Biphenyl, 1,1-	92-52-4	350
bis-(2-chloroethyl)ether	111-44-4	10
bis-(2-chloroisopropyl)ether	39638-32-9	300
bis-(chloromethyl)ether	542-88-1	10
Bisphenol A	80-05-7	120
Bromobenzene	108-86-1	60
Boron	7440-42-8	6,000
Bromodichloromethane	75-27-4	0.6
Bromoform	75-25-2	4
Bromomethane	74-83-9	10
Butylbenzene, n-	104-51-8	260
Butylbenzene, sec-	135-98-8	260
Butylbenzene, tert	98-06-6	260
Cadmium	7440-43-9	5
Camphor	76-22-2	50
Carbofuran	1563-66-2	40
Carbon disulfide	75-15-0	70
Carbon tetrachloride	56-23-5	5
Chlordane	57-74-9	2
Chloroaniline, p-	106-47-8	28
Chloromethane	74-87-3	30
Chlorophenol, 2-	95-57-8	40
Chlorotoluene	95-49-8	100
Chlorotrifluoroethylene (CFC 1113)	79-38-9	5
Chromium (Total)	7440-47-3	100
Chrysene	218-01-9	5
Clopyralid (Stinger 3SC)	1702-17-6	3500
Copper	7440-50-8	1300
Cyanide	57-12-5	200
Cyanazine (Bladex 4L/90DF)	21725-46-2	1
2,4-D (Dichlorophenoxy acetic acid, 2,4-)	94-75-7	70
Dalapon	75-99-0	200

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Table 600-1 AMBIENT GROUNDWATER QUALITY STANDARDS		
Chemical Name	CAS No.	AGQS µg/L (ppb)
DDD (Dichlorodiphenyl dichloroethane, p,p')	72-54-8	0.1
DDE (Dichlorodiphenyl dichloroethylene, p,p')	72-55-9	0.1
DDT (Dichlorodiphenyl trichloroethane, p,p')	50-29-3	0.1
Dibenzo(a,h)anthracene	53-70-3	0.1
Dibromochloromethane	124-48-1	60
Dibromochloropropane	96-12-8	0.2
Dibutylphthalate	84-74-2	800
Dichlorobenzene, 1,2- (o-DCB)	95-50-1	600
Dichlorobenzene, 1,3- (m-DCB)	541-73-1	600
Dichlorobenzene, 1,4- (p-DCB)	106-46-7	75
Dichlorobenzidine, 3,3'-	91-94-1	1.3
Dichlorodifluoromethane	75-71-8	1,000
Dichloroethane, 1,1-	75-34-3	81
Dichloroethane, 1,2-	107-06-2	5
Dichloroethylene, 1,1-	75-35-4	7
Dichloroethylene, cis-1,2-	156-59-2	70
Dichloroethylene, trans-1,2-	156-60-5	100
Dichloromethane (Methylene chloride )	75-09-2	5
Dichlorophenol, 2,4-	120-83-2	20
Dichloropropane, 1,2-	78-87-5	5
Dichloropropene, 1,3-	542-75-6	0.5
Dieldrin	60-57-1	0.1
Diethyl ether	60-29-7	1,400
Di(ethylhexyl)adipate	103-23-1	400
Di(2-ethylhexyl)phthalate (DEHP)	117-81-7	6
Diisopropyl ether (DIPE)	108-20-3	120
Dimethyl phthalate	131-11-3	50,000
Dimethylphenol, 2,4-	105-67-9	140
Dinitrophenol, 2,4-	51-28-5	14
Dinitrotoluene, 2,4-	121-14-2	10
Dinoseb	88-85-7	7
Dioxane, 1,4-	123-91-1	0.32
Diphenylhydrazine, 1,2-	122-66-7	10
Diquat	85-00-7	20
Endosulfan	115-29-7	42
Endothall	145-73-3	100
Endrin	72-20-8	2
Ethylbenzene	100-41-4	700
Ethylene dibromide	106-93-4	0.05
Ethylene glycol	107-21-1	14,000
Ethyl tertiary-butyl ether (ETBE)	637-92-3	40
Fluoranthene	206-44-0	280

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Table 600-1 AMBIENT GROUNDWATER QUALITY STANDARDS		
Chemical Name	CAS No.	AGQS µg/L (ppb)
Fluorene	86-73-7	280
Fluoride	16984-48-8	4,000
Formaldehyde	50-00-0	100
Glyphosate	1071-83-6	700
Gross alpha radionuclides		15 pCi/L
Heptachlor	76-44-8	0.4
Heptachlor epoxide	1024-57-3	0.2
Hexachlorobenzene	118-74-1	1
Hexachlorobutadiene	87-68-3	0.5
Hexachlorocyclohexane, alpha	319-84-6	0.03
Hexachlorocyclohexane, beta	319-85-7	0.1
Hexachlorocyclohexane, gamma (Lindane)	58-89-9	0.2
Hexachlorocyclopentadiene	77-47-4	50
Hexachlorodibenzodioxin, 2,3,7,8	34465-46-8	0.0221
Hexachloroethane	67-72-1	1
Indeno(1,2,3-cd)pyrene	193-39-5	0.1
Isophorone	78-59-1	100
Isopropyl benzene	98-82-8	800
Isopropyltoluene, p-	99-87-6	260
Lead	7439-92-1	15
Manganese	7440-38-2	300
Mercury	7439-97-6	2
Methanol	67-56-1	4,000
Methoxychlor	72-43-5	40
Methyl ethyl ketone (MEK)	78-93-3	4,000
Methyl isobutyl ketone (MIBK)	108-10-1	2,000
Methylnaphthalene, 1-	90-12-0	160
Methylnaphthalene, 2-	91-57-6	280
Methyl phenol, 2- (o-cresol)	95-48-7	40
Methyl phenol, 4- (p-cresol)	106-44-5	40
Methyl tertiary-butyl ether (MtBE)	1634-04-4	13
Metolachlor (Dual 8E/25G)	51218-45-2	70
Metribuzin (Sencor 75DF)	21087-64-9	70
Monochlorobenzene (Chlorobenzene)	108-90-7	100
Naphthalene	91-20-3	100
Nickel	7440-02-0	100
Nitrate	14797-55-8	10,000
Nitrite	14797-65-0	1,000
Oxamyl	23135-22-0	200
Pentachlorophenol	87-86-5	1
Perfluorohexane sulfonic acid (PFHxS), total of all isomers	335-46-4	0.018
Perfluorononanoic acid (PFNA), total of all	375-95-1	0.011

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Table 600-1 AMBIENT GROUNDWATER QUALITY STANDARDS		
Chemical Name	CAS No.	AGQS µg/L (ppb)
isomers		
Perfluorooctane sulfonic acid (PFOS), total of all isomers	1763-23-1	0.015
Perfluorooctanoic Acid (PFOA), total of all isomers	335-67-1	0.012
Phenanthrene	85-01-8	210
Phenol	108-95-2	2,000
Picloram	1918-02-1	500
Polychlorinated biphenyls (PCBs)	1336-36-3	0.5
Potassium	7440-09-7	160,000
n-Propylbenzene	103-65-1	260
Pyrene	129-00-0	210
Radium 226 and 228	7740-14-4	5 pCi/L
Selenium	7782-49-2	50
Silver	7440-22-4	100
Simazine	122-34-9	4
Strontium 90	10098-97-2	8 pCi/L
Strontium, non-radioactive	7440-24-6	4,000
Styrene	100-42-5	100
Sulfate	14808-79-8	500,000
TCDD, 2,3,7,8- (Dioxin)	1746-01-6	0.00003
Tertiary amyl methyl ether (TAME)	994-05-8	140
Tertiary butyl alcohol (TBA)	75-65-0	40
Tetrachloroethane, 1,1,1,2-	630-20-6	70
Tetrachloroethane, 1,1,2,2,-	79-34-5	2
Tetrachloroethylene (PCE)	127-18-4	5
Tetrachlorophenol, 2,3,4,6	58-90-2	200
Tetrahydrofuran	109-99-9	600
Thallium	7440-28-0	2
Toluene	108-88-3	1,000
Total Coliform	-	CTS/100ml
Toxaphene	8001-35-2	3
2,4,5-TP (Silvex)	93-72-1	50
Trichlorobenzene, 1,2,4-	120-82-1	70
Trichlorobenzene, 1,3,5-	108-70-3	40
Trichloroethane, 1,1,1-	71-55-6	200
Trichloroethane, 1,1,2-	79-00-5	5
Trichloroethylene (TCE)	79-01-6	5
Trichlorofluoromethane	75-69-4	2,000
Trichloromethane (Chloroform)	67-66-3	70
Trichlorophenol, 2,4,5-	95-95-4	700
Trichlorophenol, 2,4,6-	88-06-2	5
Trichloropropane, 1,2,3-	96-18-4	0.5

Table 600-1 AMBIENT GROUNDWATER QUALITY STANDARDS		
Chemical Name	CAS No.	AGQS µg/L (ppb)
Trimethylbenzene, 1,2,4-	95-63-6	330
Trimethylbenzene, 1,3,5-	108-67-8	330
Tritium	10028-17-8	20,000 pCi/L
Vinyl chloride	75-01-4	2
Xylenes (mixed isomers)	1330-20-7	10,000

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; amd by #9213, eff 7-23-08; ss by #10831, eff 6-1-15; amd by #11112, EMERGENCY RULE, eff 5-31-16, EXPIRES: 11-27-16; amd by #12008, eff 10-22-16; amd by #12554, eff 9-1-18; amd by #12837, eff 9-30-19; amd by #13044-A, eff 5-28-20; amd by #13147, eff 1-1-21

PART Env-Or 604 NOTIFICATION

Env-Or 604.01 Purpose. The purposes of this part are to identify those circumstances in which a responsible party or other person is required to notify the department and to set forth the procedures for such notification.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 604.02 Notification of Groundwater Quality Violation.

(a) Unless exempted under Env-Or 604.03, the responsible party shall notify the department no more than 60 days after obtaining knowledge of a violation of the groundwater quality criteria of Env-Or 603.01.

(b) Any person required to notify the department pursuant to (a), above, shall provide notification to the department in writing, including as much of the following information as is available at the time of notification:

- (1) The name, daytime telephone number, and email address, if any, of the individual notifying the department;
- (2) The location of the site;
- (3) The nature and location of the violation;
- (4) The name, daytime telephone number, and email address, if any, of each responsible party, and if there is more than one responsible party, the name, daytime telephone number, and email address, if any, of a point of contact;
- (5) The proximity of the violation to receptors and potential receptors including water supply wells and surface water; and

- (6) All available reports and sampling results related to the discovery of the violation.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 604.03 Exemptions to Notification of Groundwater Quality Violation. The following shall be exempt from the notification requirements of Env-Or 604.02:

(a) The permittee and, if different, the owner of a facility with a groundwater release detection permit, provided the permittee reports as required by Env-Or 700;

(b) The owner of a public water supply, provided the groundwater quality violation is discovered through testing required by rules in subtitle Env-Dw and the person reports as required by Env-Dw 800; and

(c) The permittee and, if different, the owner of a facility with a groundwater discharge permit, provided the permittee reports as required by Env-Wq 402.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 604.04 Discharges of Hazardous Waste. Any person required to report under RSA 147-A:11 shall notify the department in accordance with RSA 147-A and Env-Hw 100 et seq.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 604.05 NAPL Notification.

(a) The responsible party shall notify the department either orally or in writing immediately after obtaining knowledge of the detection of non-aqueous phase liquid (NAPL) of greater than 1/8 inch in thickness on groundwater unless the NAPL is being managed in accordance with the following:

(1) An emergency or initial response action conducted pursuant to Env-Or 605.03 or Env-Or 605.04;

(2) A remedial action plan approved pursuant to Env-Or 606.10; or

(3) A groundwater management permit issued pursuant to Env-Or 607.

(b) The responsible party required by (a), above, to notify the department shall provide as much of the following information as is available at the time of notification:

(1) The name, daytime telephone number, and email address, if any, of the individual notifying the department;

(2) The location of the discharge site including the department site identification number;

(3) The type and thickness of the NAPL layer observed; and

(4) A description of proposed NAPL recovery actions.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 604.06 Discharges of Oil Requiring Immediate Notification. The responsible party or other person who becomes aware of an oil discharge shall notify the department immediately after obtaining knowledge that a discharge meeting one or more of the following criteria has occurred:

- (a) A discharge of any oil into surface water or groundwater of the state;
- (b) A discharge of 25 gallons or more of oil to land;
- (c) A discharge of less than 25 gallons of oil to land, unless the discharge is cleaned up immediately and properly disposed of;
- (d) A discharge of oil that results in the presence of vapors that pose an imminent threat to human health;
- (e) A discharge of oil resulting in a violation of the groundwater quality criteria of Env-Or 603.01 in a sample collected from a water supply well; or
- (f) A discharge of oil resulting in the detection of NAPL.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 604.07 Potential Discharges of Oil Requiring Notification Within 60 Days. The responsible party or other person who becomes aware of a potential discharge of oil based on an exceedance of the soil remediation standards of Env-Or 606.19 that might have been caused by an oil discharge shall notify the department no more than 60 days after obtaining knowledge of the exceedance.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 604.08 Oil Notification Requirements. A person required to notify the department of a discharge of oil pursuant to Env-Or 604.06, or a potential discharge of oil pursuant to Env-Or 604.07 based on an exceedance of the soil remediation standards, shall provide notification to the department either orally or in writing, including as much of the following information as is available at the time of notification:

- (a) The name, daytime telephone number, and email address, if any, of the individual notifying the department;
- (b) The location of the discharge site;
- (c) The date and time of the discharge;
- (d) The type and amount of oil discharged;
- (e) The name, daytime telephone number, and email address, if any, of each responsible party, and if there is more than one responsible party, the name, daytime telephone number, and email address, if any, of a POC;
- (f) The proximity of the discharge to receptors and potential receptors including water supply wells and surface water;
- (g) The name, mailing address, daytime telephone number, and email address, if any, of the contractor hired to clean up the contamination;
- (h) A description of any emergency or initial response actions that have been taken or are proposed to be taken;

- (i) The names of other federal, state, or local government agencies that have been notified or that have responded to the discharge, or both;
- (j) The cause of the incident and the method used that detected the discharge; and
- (k) All available reports and sampling results related to the discharge.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

#### PART Env-Or 605 PRELIMINARY RESPONSE ACTIONS

Env-Or 605.01 Purpose. The purpose of this part is to:

- (a) Describe the nature and extent of preliminary response actions that are required following a:
  - (1) Discharge;
  - (2) Potential discharge of oil based on an exceedance of the soil remediation standards; or
  - (3) Groundwater quality violation; and
- (b) Prescribe standards and procedures for conducting emergency response actions, initial response actions, and initial site characterizations.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 605.02 Emergency or Immediate Response Actions for Hazardous Waste Discharges. The responsible party shall conduct emergency or immediate response actions for any hazardous waste discharge in accordance with RSA 147-A and Env-Hw 100 et seq.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 605.03 Emergency Response Actions for Oil Discharges.

- (a) The responsible party shall initiate an emergency response action as soon as practicable to prevent, eliminate, or minimize damage to human health and the environment from any discharge of oil.
- (b) The responsible party shall conduct an emergency response action at any site where:
  - (1) A discharge of oil has created or might create hazardous or explosive vapors;
  - (2) A discharge of oil has caused the contamination of any private or public water supply well;
  - (3) A discharge of oil has caused a sheen on surface water;
  - (4) A discharge of oil has caused oil to enter a storm drain or sanitary sewer;
  - (5) NAPL from a discharge of oil is detected; and
  - (6) The department determines and notifies the responsible party that emergency response actions are necessary to prevent, eliminate, or minimize damage to human health and the environment from a discharge of oil.



(c) The responsible party shall conduct an emergency response action that:

- (1) Assesses and evaluates fire, health, and safety hazards;
- (2) Stops the discharge;
- (3) Contains the discharge;
- (4) Cleans up and disposes of discharged oil and contaminated debris in accordance with all local, state, and federal regulations;
- (5) Protects potential receptors from contamination; and
- (6) Stabilizes the site to protect human health and the environment.

(d) An emergency response action shall include such assessments, containment measures, or removal actions as are consistent with the purposes of emergency response actions as identified in (c), above, or otherwise necessary to prevent, eliminate, or minimize damage to human health and the environment, as applicable, such as:

- (1) Discharge containment measures;
- (2) Vapor abatement measures;
- (3) Drainage controls;
- (4) Providing potable water;
- (5) NAPL recovery;
- (6) Disposal of oil or contaminated debris;
- (7) Soil excavation and disposal; and
- (8) Collection and analysis of soil, sediment, surface water, groundwater, soil gas, or indoor air samples.

(e) The responsible party shall notify the department and others of the emergency response action in accordance with Env-Or 604 and Env-Or 610.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 605.04 Initial Response Actions.

(a) The responsible party shall conduct an initial response action at a site following a discharge or groundwater quality violation in order to:

- (1) Reduce risks to human health and the environment; and
- (2) Reduce potential future costs of response actions by remediating or containing contamination until such a time as a more comprehensive response action conducted in accordance with Env-Or 606 can be implemented.

(b) An initial response action shall include such assessments, containment measures, or removal actions as are consistent with the purpose of an initial response action as identified in (a), above, or otherwise necessary to prevent, eliminate, or minimize damage to human health and the environment, as applicable, such as:

- (1) NAPL recovery;
- (2) Groundwater treatment and recovery;
- (3) Soil excavation and disposal;
- (4) Soil vapor extraction;
- (5) Receptor surveys;
- (6) Vapor abatement measures; and
- (7) Collection and analysis of soil, sediment, surface water, groundwater, soil gas, or indoor air samples.

(c) The responsible party shall notify the department and others of the initial response action in accordance with Env-Or 604 and Env-Or 610.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 605.05 Emergency and Initial Response Action Approval.

(a) The responsible party shall submit a work scope describing a proposed emergency or initial response action to the department for approval prior to implementation except as provided for in (c), below.

(b) The department shall approve a work scope for an emergency or initial response action if it is consistent with the applicable provisions of Env-Or 605.03 and Env-Or 605.04.

(c) In order to minimize contamination, reduce risk of exposure, or promote more timely response actions, the responsible party may begin emergency or initial response actions at a site before the work scope is submitted to or approved by the department, provided the responsible party:

- (1) Notifies the department either verbally or in writing of the proposed activities to be conducted prior to beginning the response actions;
- (2) Incorporates the self-initiated measures into the report submitted to the department pursuant to Env-Or 605.06 below; and
- (3) Complies with the requirements of all other applicable local, state, and federal rules and statutes.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 605.06 Emergency and Initial Response Action Reporting Requirements.

(a) The responsible party shall submit a written report to the department within 30 days of completing an emergency response action or an initial response action.

(b) The report shall include the following information:

- (1) The site owner's name, mailing address, daytime telephone number, and email address, if any;

- (2) The name, mailing address, daytime telephone number, and email address, if any, of each responsible party, and if there is more than one responsible party, the name, mailing address, daytime telephone number, and email address, if any, of a POC;
- (3) The name, mailing address, telephone number, and email address, if any, of each consultant and contractor hired to conduct the response action;
- (4) Identification of potential receptors;
- (5) The type and quantity of the discharge;
- (6) A description of response actions conducted;
- (7) Disposal documentation including copies of bills of lading and manifests;
- (8) Copies of laboratory analytical data;
- (9) A site sketch showing the location of the discharge in relation to site buildings and site boundaries; and
- (10) A summary of findings.

(c) Where response actions continue for longer than 120 days, the responsible party shall submit an interim response action report every 60 days that contains the information specified in (b), above, for that reporting period.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 605.07 Initial Site Characterization Required. The department shall send a written request for an initial site characterization to the responsible party following receipt of notice under Env-Or 604 unless:

(a) The department determines, based on preliminary response actions, that the site meets the no further action criteria of Env-Or 609.02; or

(b) The department determines that a site investigation in accordance with Env-Or 606.01 is required to adequately characterize the nature and extent of the discharge, based on a review of any response actions taken, the type and extent of contamination, and risk to receptors.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 605.08 Initial Site Characterization.

(a) The responsible party shall perform an initial site characterization if requested by the department pursuant to Env-Or 605.07.

(b) The responsible party shall submit a report of the initial site characterization required in (a), above, to the department within 60 days of a department request for an initial site characterization.

(c) The initial site characterization shall:

- (1) Determine the source, location, and estimated quantity of the discharge and any response actions taken;
- (2) Determine the nature and extent of contamination encountered; and

- (3) Identify nearby receptors and potential receptors.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 605.09 Initial Site Characterization Report. The initial site characterization report shall include the following:

- (a) Site information including:
- (1) The department site identification number;
  - (2) The site name and address;
  - (3) The name, mailing address, daytime telephone number, and email address, if any, of the site owner and of a contact person for the site;
  - (4) A description of all known discharges of regulated contaminants at the site;
  - (5) A description of all response actions conducted at the site;
  - (6) A description of site use at the time of the discharge; and
  - (7) A site sketch that includes the following:
    - a. The location of the discharge;
    - b. The location of site buildings;
    - c. The location of site underground utilities; and
    - d. The approximate site boundaries;
- (b) A summary of groundwater, soil, surface water, soil gas, indoor air, and water supply well sampling data, as appropriate;
- (c) A copy of test pit logs, borings logs, and monitoring well construction details;
- (d) A preliminary assessment of receptors and potential receptors located within 500 feet of the site including:
- (1) Drinking water supply wells including owner's name and mailing address; and
  - (2) Surface water bodies;
- (e) A copy of any reports or sampling data relating to the discharge if not already on file with the department; and
- (f) A summary of findings.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 605.10 Investigation Due to Discovery of Discharges from Unknown Sources. When a discharge from an unknown source is discovered adjacent to a facility as defined in RSA 146-A:2, IX or RSA

146-C:1, V, the owner of such facility shall conduct an initial site characterization in accordance with Env-Or 605.07.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

PART Env-Or 606 COMPREHENSIVE RESPONSE ACTIONS

Env-Or 606.01 Site Investigation Required.

(a) The responsible party shall perform a site investigation following a discharge or groundwater quality violation if so requested by the department pursuant to Env-Or 606.02.

(b) The site investigation shall:

- (1) Determine the source, nature, location, and full extent of contamination;
- (2) Identify receptors and potential receptors; and
- (3) Identify the need to conduct further investigation or remedial actions.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.02 Site Investigation Request; Exemptions. The department shall send a written request for a site investigation to the responsible party after receipt of notice under Env-Or 604 unless:

(a) The department determines that an initial site characterization will be adequate to define the nature and extent of contamination based on a review of any response actions taken, the type and extent of contamination, and risk to receptors; or

(b) The site meets the no further action criteria of Env-Or 609.02.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.03 Site Investigation Report.

(a) The responsible party shall submit a report of the site investigation required by Env-Or 606.01 to the department for approval within 120 days of a department request for a site investigation.

(b) The site investigation report shall include the following:

- (1) The site background information identified in Env-Or 606.04;
- (2) The summary of subsurface explorations and sampling identified in Env-Or 606.05;
- (3) The description of the site's geology and hydrology identified in Env-Or 606.06;
- (4) The conceptual model identified in Env-Or 606.07;
- (5) The remedial alternatives, recommendations, and summaries identified in Env-Or 606.08; and
- (6) The appendices identified in Env-Or 606.09.

(c) The site investigation report shall be dated, signed, and sealed by the professional of record.

(d) The department shall accept the site investigation report upon determining that the report contains all information required by (b), above.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.04 Site Background Information. The site investigation report shall include the following site background information:

- (a) The department site identification number;
- (b) The site name, address, property deed reference by county book and page, and property tax map and lot numbers;
- (c) The name, mailing address, and daytime telephone number of the site owner and of a contact person for the site;
- (d) A history of site ownership and operation based on documented land use, in accordance with “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process”, ASTM International (ASTM) document ASTM E 1527-05 or ASTM E 1527-13 (ASTM E 1527), available as noted in Appendix B;
- (e) Copies of historical site plans and Sanborn Fire Insurance maps for the site, where available;
- (f) A list of any aerial photographs reviewed, including the date and source for each photograph and a description of observations;
- (g) A description of possible past or present contamination sources such as the following:
  - (1) Underground or above ground storage tank systems including pumps, piping, and appurtenances;
  - (2) Dry wells and floor drains including discharge locations, if known;
  - (3) Areas of stained soil or stressed or dead vegetation;
  - (4) Landfills;
  - (5) Lagoons;
  - (6) Septic systems;
  - (7) Areas of surface discharges or spills;
  - (8) Drum storage areas;
  - (9) Areas used to store, treat, or dispose of hazardous wastes or hazardous substances;
  - (10) Stockpiled soils;
  - (11) Buried drum areas; and
  - (12) Herbicide and pesticide use, storage or disposal areas;
- (h) A description of all known discharges of regulated contaminants, including the following information:

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- (1) The date and a description of the discharge, including estimated quantities lost and recovered, the location of the discharge, and the party responsible for the discharge; and
  - (2) The date the discharge was reported to the department, if reported; and
  - (3) A description of all response actions taken;
- (i) A list of any previous investigations and reports pertinent to the site relating to a discharge of regulated contaminants, including a brief summary of findings;
  - (j) A copy of any previous investigation or report relating to a discharge of regulated contaminants, if not already on file with the department;
  - (k) A list of governmental records reviewed relating to discharges at the site;
  - (l) A locus plan using a color photocopy of a U.S. Geological Survey (USGS) map, 7-1/2 minute series if available, which clearly identifies the site location;
  - (m) A site plan drawn to scale on an 8-1/2 inches by 11 inches or 11 inches by 17 inches sheet, that includes the following:
    - (1) A title, a legend, and a true north arrow;
    - (2) A graphic scale bar;
    - (3) Source(s) from which the site plan was derived, if applicable;
    - (4) The location, elevation, and datum of a permanent and recoverable bench mark;
    - (5) Surface topography using ground spot elevations, contours, or noted changes in slope;
    - (6) The location of the site's property boundaries;
    - (7) The areas of known and possible contaminant sources past or present on the site including but not limited to current or former possible sources listed in (g)(1)-(12), above;
    - (8) Any paved areas on the site;
    - (9) Monitoring wells, test pits and borings; and
    - (10) Identification of the following on and within 100 feet of the site:
      - a. Surface water bodies;
      - b. Water supply wells;
      - c. Surface water sampling stations;
      - d. Structures and buildings;
      - e. Drainage swales; and
      - f. Potential preferential migration pathways including but not limited to underground utilities; and

(n) Any additional information including the source(s) from which the site background information was obtained.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.05 Summary of Subsurface Explorations and Sampling. The site investigation report shall include a summary of subsurface explorations and sampling conducted at the site and off-site surrounding area including:

- (a) A description of test pits, borings, monitoring wells, and well development activities;
- (b) A description of water table elevation observations, organic vapor analyzer results, and odors noted;
- (c) A copy of the site plan showing the orientation of the graphical geologic cross section(s) and the location of test pits, borings, monitoring wells, and other sources of geologic information for the site;
- (d) Groundwater, soil, air, soil gas, sediment, surface water, and water supply well sampling data, as applicable, including:
  - (1) Sampling methodologies;
  - (2) For all monitoring wells, surface water sampling points, and water supply wells where contamination has been detected, analytical results for a minimum of 2 sets of samples collected at least 2 weeks apart; and
  - (3) At sites where groundwater contamination has been detected, samples collected from water supply wells at risk;
- (e) One or more tables that summarize all current groundwater, soil, surface water, and water supply well analytical data including:
  - (1) Sample locations;
  - (2) Sample dates;
  - (3) Chemicals detected including the analytical detection limits;
  - (4) Chemical concentrations; and
  - (5) Chemicals that exceed regulatory limits;
- (f) One or more tables that summarize historic groundwater, soil, surface water, and water supply well analytical data including:
  - (1) Sample locations;
  - (2) Sample dates; and
  - (3) Chemical concentrations; and
- (g) A description of all other methods used to evaluate subsurface conditions as appropriate, such as:
  - (1) Geophysical methods;
  - (2) Geochemical analyses;



- (3) Cone penetrometer; and
- (4) Fracture trace and photo lineament analysis.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.06 Site Geology and Hydrology. The site investigation report shall include a description of the geology and hydrogeology of the site including:

- (a) Groundwater potentiometric surface(s), hydraulic gradients, flow direction, hydraulic conductivity, and seepage velocity;
- (b) Soil types, distribution, and permeability;
- (c) When encountered and drilled, bedrock type and characteristics, including depths and contours;
- (d) Geologic cross-sections to describe the geology and hydrogeology of the site including the following:
  - (1) One cross-section parallel to groundwater flow and one cross-section perpendicular to groundwater flow;
  - (2) The horizontal and vertical scale of each cross-section;
  - (3) Approximate ground surface elevations and inferred elevation of contacts between the major geologic units;
  - (4) A complete textural description of the major soil and bedrock units, with geologic interpretation, such as fill, till, stratified drift, weathered bedrock;
  - (5) The location of all data sources, including soil borings, monitoring wells, test pits, and bedrock cores upon which the geologic interpretations are based;
  - (6) The line of section referenced to an appropriate site plan;
  - (7) The offset distance for all data points not located directly on the line of section;
  - (8) The screened interval of all groundwater monitor wells and piezometers, with measured water level or potentiometric surface elevations;
  - (9) The surveyed elevations of any surface water features intercepted by the line of section; and
  - (10) Contaminant concentrations at each data point indicated on the cross-section;
- (e) A table of groundwater elevation data including:
  - (1) Groundwater elevations;
  - (2) Top of well casing elevations surveyed to the benchmark required under Env-Or 606.04(m)(4);
  - (3) Measured depth to water table from top of casing;
  - (4) If NAPL is present, measured depth to NAPL from top of casing; and
  - (5) If NAPL is present, NAPL thickness;

- (f) A potentiometric surface map indicating the groundwater flow direction; and
- (g) Any other information that is necessary to describe the geology and hydrogeology of the site.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.07 Conceptual Model. The site investigation report shall include a conceptual model that includes:

(a) A narrative description supported by the technical illustrations required pursuant to (b), below, that describes the occurrence and movement of groundwater and contaminants at the site including transport mechanisms, migration, and degradation pathways;

(b) Technical illustrations of the nature and extent of contamination including the following:

(1) A groundwater contaminant concentration contour map(s), prepared using the site plan prepared pursuant to Env-Or 606.04(m) as a base map, that depicts:

- a. The lateral distribution of groundwater contamination; and
- b. The predominant contamination characteristics;

(2) A soil contaminant concentration contour map(s), prepared using the site plan prepared pursuant to Env-Or 606.04(m) as a base map, that depicts:

- a. The lateral extent of soil contamination; and
- b. The predominant contamination characteristics;

(3) A contaminant distribution map(s), prepared using the cross-sections prepared pursuant to Env-Or 606.06(d) as a base map, that depicts:

- a. The vertical extent of soil and groundwater contamination; and
- b. The predominant contamination characteristics;

(c) An estimate of the amount of contaminant mass at the site;

(d) A potential receptor map, prepared using a tax map as a base map, that identifies and locates, to the extent ascertainable, the following listed items located within 1,000 feet of the site:

- (1) Streets;
- (2) Properties, including tax map and lot number, ownership, and land use;
- (3) Surface water;
- (4) Locations where potentially sensitive human subpopulations exist such as daycare centers, schools, playgrounds, parks, senior housing; and
- (5) Water supply wells including tax map and lot number and owner's name and mailing address for each well;

(e) A list of water supply wells sampled pursuant to Env-Or 606.05(d)(3), including for each well:

- (1) The owner's name, mailing address, tax map and lot number; and

- (2) The type of well construction and well depth to the extent ascertainable; and
- (f) A preliminary groundwater management zone delineated in accordance with Env-Or 607.05.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.08 Remedial Alternatives, Summary, and Recommendations. The site investigation report shall include a preliminary screening of remedial alternatives, a summary, and recommendations including:

- (a) A preliminary screening of remedial alternatives that identifies remedial action alternatives that meet the criteria of Env-Or 606.13;
- (b) A summary of the following:
  - (1) Site conditions;
  - (2) Subsurface explorations;
  - (3) Conceptual model including contaminant distribution; and
  - (4) Receptors and potential receptors; and
- (c) Recommendations, including a discussion of proposed corrective action activities, that include one or more of the following as appropriate:
  - (1) Interim response actions to abate immediate risks to human health and the environment;
  - (2) Periodic sampling;
  - (3) Additional site investigation work;
  - (4) Remedial action; or
  - (5) No further action.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.09 Appendices. The site investigation report shall include the following in appendices:

- (a) Color photographs showing key site features;
- (b) A description of the field procedures used including methods for installing monitoring wells and borings and collecting soil, soil gas, groundwater, drinking water, and air samples;
- (c) Field screening data;
- (d) Boring logs and monitoring well construction details including but not limited to the following:
  - (1) Soil sample descriptions;
  - (2) Drilling methods;
  - (3) Water table observations;

- (4) Odors observed; and
- (5) Organic vapor analyzer results;
- (e) Analytical laboratory data including chain of custody forms and holding times; and
- (f) Detailed calculations and summary of data used for supplemental analysis, if any.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.10 Remedial Action Plan.

(a) A responsible party required to conduct a site investigation under Env-Or 606.01 shall prepare a remedial action plan unless exempted under Env-Or 606.11.

(b) The responsible party shall submit a report of the remedial action plan required in (a), above, to the department within 120 days following written notice from the department that a remedial action plan is required under (a), above.

(c) The remedial action plan report shall be dated, signed, and sealed by the engineer of record.

(d) The remedial action plan shall:

- (1) Provide for protection of human health and the environment;
- (2) Provide a detailed evaluation of remedial alternatives pursuant to Env-Or 606.12(c) with justification for the recommended alternative;
- (3) Recommend action to:
  - a. Remove or treat the source of contamination;
  - b. Contain the contamination source to limit the impact to groundwater, surface water, and soil to the extent feasible;
  - c. Protect human health from exposure through the indoor air exposure pathway;
  - d. Protect human health from exposure through the direct contact exposure pathway;
  - e. Contain contaminated groundwater within the limits of a proposed groundwater management zone, delineated in accordance with Env-Or 607.05;
  - f. Restore groundwater quality to the groundwater quality criteria specified in Env-Or 603.01; and
  - g. Restore soil quality to the soil remediation criteria specified in Env-Or 606.19; and
- (4) Provide for financial assurance pursuant to Env-Or 606.20 and Env-Or 606.21, as applicable.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.11 Remedial Action Plan Exemptions. Unless otherwise required by statute, a remedial action plan shall not be required where:

- (a) The site meets the no further action criteria of Env-Or 609.02;

(b) The department determines, based on the site investigation, that there is no remaining source of contamination at the site and there are no impacts to receptors; or

(c) A presumptive remedy is selected that will meet the criteria of Env-Or 606.13 and is agreed to by each responsible party and the department.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.12 Remedial Action Plan Report. The remedial action plan report shall include the following:

(a) A brief summary of site investigation work completed to date including a description of the current site conceptual model that includes at a minimum the information described in Env-Or 606.07;

(b) A description of any other information collected during the site investigation that supports the selected remedy for the site;

(c) An evaluation of a minimum of 2 remedial alternatives, or combination of alternatives, that includes an assessment of:

(1) Effectiveness and reliability;

(2) Feasibility and ease of implementation;

(3) Risk reduction and associated benefits;

(4) Cost effectiveness using the net present worth of all future costs; and

(5) Estimated time to reach the no further action criteria pursuant to the requirements of Env-Or 609.02;

(d) Justification for the recommended alternative;

(e) For the recommended alternative, the following information, as applicable:

(1) A site map drawn to scale on an 8-1/2 inches by 11 inches or 11 inches by 17 inches sheet, using the site plan prepared pursuant to Env-Or 606.04(m) as a base map, and showing:

a. The system layout and areas of influence for a treatment system; or

b. The lateral extent of a source removal project;

(2) A preliminary process flow diagram showing major system components and controls;

(3) Final and interim contaminant reduction performance standards including a proposed schedule with target dates;

(4) Recommendations for conducting any additional investigations, pilot tests, or bench scale studies before proceeding with final design and construction of the recommended alternative;

(5) A description of the methodology for evaluating the performance of the recommended alternative, including monitoring locations and frequency;

(6) A schedule for submitting the periodic status reports required pursuant to Env-Or 606.15(d);

- (7) A schedule for implementing the recommended alternative;
- (8) A list of federal, state, and local permits required to implement the recommended alternative;
- (9) A description of any activity and use restrictions being proposed at the site including a proposed self-certification schedule; and
- (10) A description of the proposed financial assurance mechanisms as specified in Env-Or 606.20 and Env-Or 606.21;

(f) Recommendations to provide potable water to receptors when a water supply well no longer meets the groundwater quality criteria of Env-Or 603.01; and

(g) The proposed delineation of the groundwater management zone overlaid on a tax map that complies with Env-Or 607.05.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.13 Remedial Action Plan Approval. The department shall approve the remedial action plan upon determining that:

- (a) Human health and the environment will be protected;
- (b) The groundwater quality criteria specified in Env-Or 603.01 will be met;
- (c) Sources of contamination will be controlled to reduce or eliminate further discharges;
- (d) Contaminated soil will be removed, treated, or contained to reduce the human health risk associated with direct exposure via dermal contact, ingestion, and inhalation;
- (e) The risk to human health and the environment will be reduced to the greatest extent practicable, balancing costs and benefits by evaluating the risk to human health and the environment by the methods described in the ASTM E 2081-00 (2010)e1 entitled “Standard Guide for Risk Based Corrective Action” (ASTM E 2081), available as noted in Appendix B;
- (f) Long-term management, including operation and maintenance of the remediation equipment and site monitoring requirements, will be minimized;
- (g) The potential need for modification of the remedy will be minimized;
- (h) Resource value of groundwater impacted by the contamination will be protected to the greatest extent practicable taking into account current and anticipated future land use;
- (i) Long-term institutional and engineering controls will be reliable; and
- (j) Financial assurance as required by Env-Or 606.20 and Env-Or 606.21 will be available.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.14 Corrective Action Prior to Remedial Action Plan Approval. In order to minimize contamination, reduce risk of exposure, or promote more timely remediation, the responsible party may begin remediation at a site before a remedial action plan is submitted to or approved by the department, provided the responsible party:

- (a) Notifies the department in writing of the proposed activities to be conducted prior to beginning remediation;
- (b) Incorporates the self-initiated remediation measures into the remedial action plan that is submitted to the department for approval; and
- (c) Complies with all other applicable local, state, and federal requirements.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.15 Remedial Action Implementation.

(a) If the approved remedial action does not include any active on-site treatment system, containment system, or source removal project, the responsible party shall initiate implementation of the approved remedial action within 90 days following the department's approval of the remedial action.

(b) If the approved remedial action includes any active on-site treatment system, containment system, or source removal project, the responsible party shall:

(1) Submit design plans and construction specifications to the department prepared pursuant to Env-Or 606.16 for the active on-site treatment system or source removal project, as applicable, within 90 days following department approval of the remedial action; and

(2) Initiate implementation of the approved remedial action within 90 days following department approval of the design plans and construction specifications.

(c) The responsible party shall submit a remedial action implementation report prepared pursuant to Env-Or 606.17 to the department within 90 days following completion of remedial action implementation activities.

(d) The responsible party shall submit periodic status reports prepared pursuant to Env-Or 606.18 to the department to monitor the effectiveness of remedial action implementation activities at the frequency specified in the department-approved remedial action.

(e) If implementation of the approved remedial action fails to meet performance standards specified in the approved remedial action, the responsible party shall:

(1) Notify the department in writing; and

(2) Submit recommendations for revising the remedial action, including a schedule of milestones, to the department for approval.

(f) The department shall approve the revised remedial action if the revised proposal meets the requirements of Env-Or 606.13 and addresses the reason(s) why the original remedial action did not meet the performance standards specified.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; amd by #9213, eff 7-23-08; ss by #10831, eff 6-1-15

Env-Or 606.16 Design Plans and Construction Specifications.

(a) The design plans and construction specifications required pursuant to Env-Or 606.15(b) shall include the following, as applicable:

- (1) A description of the purpose and function of the remedial treatment system or source removal project;
- (2) A list of applicable design criteria for the remedial treatment system or source removal project including, but not limited to:
  - a. Site limitations;
  - b. Physical properties of the soil and aquifer;
  - c. Space restrictions;
  - d. Subsurface obstacles, barriers, or both;
  - e. Noise restrictions;
  - f. Air and water discharge permit requirements;
  - g. Remedial treatment system flow rates; and
  - h. Remedial treatment system efficiency;
- (3) Remedial treatment system performance standards;
- (4) Characteristics, quantities, and locations of environmental media and contaminants to be treated or removed;
- (5) Expected waste products that will be generated and their means of disposal;
- (6) Pilot test results used in the preparation of the design; and
- (7) Manufacturer's data describing the equipment in the design.

(b) Construction plans and specifications required pursuant to Env-Or 606.15(b) shall provide sufficient detail for construction of the remedial system or source removal project.

(c) The design plans and construction specifications prepared pursuant to this section shall be dated, signed, and sealed by the engineer of record.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.17 Remedial Action Implementation Report.

(a) The remedial action implementation report required pursuant to Env-Or 606.15(c) shall include the following:

- (1) As-built drawings indicating any changes from the original design documents;
- (2) The results of any testing or measurements made during remedial action implementation activities;
- (3) A description of remedial action implementation activities including tables and figures; and
- (4) Transportation and disposal documentation for any remediation waste transported off-site, including:



- a. Free product;
- b. Spent carbon;
- c. Contaminated groundwater; and
- d. Contaminated soils.

(b) The remedial action implementation report prepared pursuant to (a), above, shall be dated, signed, and sealed by the professional of record.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.18 Periodic Status Report.

(a) Each periodic status report required pursuant to Env-Or 606.15(d) shall include the following:

- (1) A summary of work performed during the period including a description of the type and frequency of monitoring activities conducted;
- (2) A review of the site conceptual model noting any changes;
- (3) A tabular and graphical summary of groundwater quality and treatment system monitoring data showing trends in contaminant concentrations, including cumulative mass of contaminant removed by the treatment system;
- (4) An evaluation of operation and maintenance requirements, and recommendations for modifications, adjustments, or upgrades, if any; and
- (5) An evaluation of progress towards meeting performance standards including any recommendations for remedial action revisions.

(b) The periodic status reports prepared pursuant to (a), above, shall be dated, signed, and sealed by the professional of record.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.19 Soil Remediation Criteria.

(a) Soil remediation standards shall apply to all contaminated soil resulting from a discharge except as provided for in (c) through (f), below.

(b) Soil remediation standards shall be as set forth in Table 600-2 below:

Table 600-2 SOIL REMEDIATION STANDARDS		
Chemical Name	CAS No.	Concentration (mg/kg)
Acenaphthene	83-32-9	340
Acenaphthylene	208-96-8	490
Acetone	67-64-1	75
Acrylonitrile	107-13-1	0.5

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Table 600-2  
SOIL REMEDIATION STANDARDS

Chemical Name	CAS No.	Concentration (mg/kg)
Alachor	15972-60-8	0.2
Aldicarb	116-06-3	0.1
Aldicarb sulfone	1646-88-4	0.1
Aldicarb sulfoxide	1646-87-3	0.2
Aldrin	309-00-2	0.09
Allyl chloride	107-05-1	1
Anthracene	120-12-7	1,000
Antimony	7440-36-0	9
Arsenic	7440-38-2	11
Atrazine	1912-24-9	0.09
Barium	7440-39-3	1000
Benzene	71-43-2	0.3
Benzidine	92-87-5	0.01
Benzo(a)anthracene	56-55-3	1
Benzo(a)pyrene	50-32-8	0.7
Benzo(b)fluoranthene	205-99-2	1
Benzoic acid	65-85-0	350
Benzo(k)fluoranthene	207-08-9	12
Beryllium	7440-41-7	12
Biphenyl, 1,1-	92-52-4	125
Bis (2Chloroisopropyl) ether	108-60-1	5
Bis (Chloroethyl) ether	111-44-4	0.7
Bisphenol A	80-05-7	1,300
Boron	7440-42-8	1,000
Bromodichloromethane	75-27-4	0.1
Bromoform	75-25-2	0.1
Bromomethane	74-83-9	0.3
Butylbenzene, n-	104-51-8	110
Butylbenzene, sec-	135-98-8	130
Butylbenzene, tert-	98-06-6	100
Cadmium	7440-43-9	33
Carbofuran	1563-66-2	0.6
Carbon disulfide	75-15-0	460
Carbon tetrachloride	56-23-5	12
Chlordane	57-74-9	4
Chloroaniline, p-	106-47-8	1.3
Chloromethane	74-87-3	3
Chlorophenol, 2-	95-57-8	2
Chlorotoluene, 2 (o)	95-49-8	15
Chlorotoluene, 4 (p)	106-43-4	680
Chromium (III)	16065-83-1	1,000
Chromium (VI)	18540-29-9	130
Chrysene	218-01-9	120
Cyanazine	21725-46-2	0.03

Table 600-2  
SOIL REMEDIATION STANDARDS

Chemical Name	CAS No.	Concentration (mg/kg)
Cyanide	57-12-5	22
2,4-D (Dichlorophenoxy acetic acid, 2,4-)	94-75-7	300
Dalapon	75-99-0	3
DDD (Dichlorodiphenyl dichloroethane, p,p')	72-54-8	6
DDE (Dichlorodiphenyl dichloroethylene, p,p')	72-55-9	4
DDT (Dichlorodiphenyl trichloroethane, p,p')	50-29-3	4
Dibenzo(a,h)anthracene	53-70-3	0.7
Dibromochloromethane	124-48-1	1
Dibromochloropropane	96-12-8	0.1
Dibutylphthalate	84-74-2	2,600
Dichlorobenzene, 1,2- (o-DCB)	95-50-1	88
Dichlorobenzene, 1,3- (m-DCB)	541-73-1	150
Dichlorobenzene, 1,4- (p-DCB)	106-46-7	7
Dichlorobenzidine, 3,3'-	91-94-1	0.7
Dichlorodifluoromethane	75-71-8	1,000
Dichloroethane, 1,1-	75-34-3	3
Dichloroethane, 1,2-	107-06-2	0.1
Dichloroethylene, 1,1-	75-35-4	14
Dichloroethylene, cis-1,2-	156-59-2	2
Dichloroethylene, trans-1,2-	156-60-5	9
Dichloromethane (Methylene chloride)	75-09-2	0.1
Dichlorophenol, 2,4-	120-83-2	0.7
Dichloropropane, 1,2-	78-87-5	0.1
Dichloropropene, 1,3-	542-75-6	0.1
Dieldrin	60-57-1	0.06
Diethyl ether	60-29-7	3900
Diethyl phthalate	84-66-2	1,000
Di-(2-ethylhexyl)phthalate (DEHP)	117-81-7	72
Diisopropyl ether (DIPE)	108-20-3	10
Dimethyl phthalate	131-11-3	700
Dimethylphenol, 2,4-	105-67-9	4
Dinitrophenol, 2,4-	51-28-5	0.7
Dinitrotoluene, 2,4-	121-14-2	0.7
Dinoseb	88-85-7	1
Dioxane, 1,4-	123-91-1	5
Dioxin (2,3,7,8-TCDD equivalents)	1746-01-6	0.001
Diphenylhydrazine, 1,2-	122-66-7	1
Diquat (dibromide)	85-00-7	0.3
Endosulfan	115-29-7	45
Endothall	145-73-3	1
Endrin	72-20-8	8
Ethyl tert butyl ether (ETBE)	637-92-3	0.7
Ethylbenzene	100-41-4	120
Ethylene dibromide	106-93-4	0.1

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Table 600-2  
SOIL REMEDIATION STANDARDS

Chemical Name	CAS No.	Concentration (mg/kg)
Ethylene glycol	107-21-1	91
Fluoranthene	206-44-0	960
Fluorene	86-73-7	77
Fluoride	7782-41-4	2200
Formaldehyde	50-00-0	1
Heptachlor	76-44-8	0.2
Heptachlor epoxide	1024-57-3	0.1
Hexachlorobenzene	118-74-1	0.8
Hexachlorobutadiene	87-68-3	17
Hexachlorocyclohexane, alpha	319-84-6	0.06
Hexachlorocyclohexane, beta	319-85-7	0.06
Hexachlorocyclohexane, gamma	58-89-9	0.09
Hexachlorocyclopentadiene	77-47-4	200
Hexachloroethane	67-72-1	0.7
Indeno(1,2,3-cd)pyrene	193-39-5	1
Isophorone	78-59-1	1
Isopropyl benzene	98-82-8	330
Lead	7439-92-1	400
Manganese	7439-96-5	1,000
MCPA (2-Methyl-4-chlorophenoxyacetic acid)	94-74-6	13
MCPP (2-(2- Methyl-4-chlorophenoxy) propionic acid)	93-65-2	26
Mercury (inorganic)	7439-97-6	7
Methanol	67-56-1	50
Methoxychlor	72-43-5	130
Methyl ethyl ketone (MEK)	78-93-3	51
Methyl isobutyl ketone (MIBK)	108-10-1	29
Methyl mercury	22967-92-6	3
Methylnaphthalene, 2-	91-57-6	96
Methyl phenol, 2-	95-48-7	0.9
Methyl phenol, 4-	106-44-5	0.7
Methyl tert butyl ether (MTBE)	1634-04-4	0.2
Metolachlor	51218-45-2	3
Metribuzin	21087-64-9	5
Monochlorobenzene	108-90-7	6
Naphthalene	91-20-3	5
Nickel	7440-02-0	400
Oxamyl	23135-22-0	2
Pentachlorophenol	87-86-5	3
Phenol	108-95-2	56
Picloram	1918-02-1	6
Polychlorinated Biphenyls (PCBs)	1336-36-3	1
Propyl benzene, n-	103-65-1	85
Pyrene	129-00-0	720

Table 600-2 SOIL REMEDIATION STANDARDS		
Chemical Name	CAS No.	Concentration (mg/kg)
Selenium	7782-49-2	180
Silver	7440-22-4	89
Simazine	122-34-9	0.4
Styrene	100-42-5	17
Tertiary amyl methyl ether (TAME)	994-05-8	3
Tertiary butyl alcohol (TBA)	75-65-0	2
Tetrachloroethane, 1,1,1,2-	630-20-6	0.8
Tetrachloroethane, 1,1,2,2,-	79-34-5	4
Tetrachloroethylene (PCE)	127-18-4	2
Tetrachlorophenol 2,3,4,6	58-90-2	130
Thallium	7440-28-0	10
Toluene	108-88-3	100
Total Petroleum Hydrocarbons		10,000
Toxaphene	8001-35-2	1
2,4,5-TP (Silvex)	93-72-1	60
Trichlorobenzene, 1,2,4-	120-82-1	19
Trichloroethane, 1,1,1-	71-55-6	78
Trichloroethane, 1,1,2-	79-00-5	0.1
Trichloroethylene (TCE)	79-01-6	0.8
Trichlorofluoromethane	75-69-4	1,000
Trichloromethane (Chloroform)	67-66-3	3
Trichlorophenol, 2,4,5-	95-95-4	24
Trichlorophenol, 2,4,6-	88-06-2	0.7
Trichloropropane, 1,2,3-	96-18-4	0.1
Trimethylbenzene, 1,2,4	95-63-6	130
Trimethylbenzene, 1,3,5	108-67-8	96
Vinyl chloride	75-01-4	1
Xylenes (mixed isomers)	1330-20-7	500
Zinc	7440-66-6	1,000

(c) In lieu of the soil standards in Table 600-2, the responsible party may develop site-specific soil remediation standards by evaluating the risk to human health and the environment using the methods described in ASTM Standard E 1739-95 (2010)e1 entitled “Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites” (ASTM E 1739-95), or ASTM E 2081, available as noted in Appendix B, as applicable.

(d) Site-specific soil standards developed pursuant to (c), above, shall:

- (1) Demonstrate that leaching of contaminants to groundwater will not result in violations of ambient groundwater quality standards as specified in Env-Or 603.03;
- (2) Demonstrate that no significant risk to human health and the environment exists at the site pursuant to the procedures prescribed in ASTM E 1739-95 or ASTM E 2081, as applicable, as noted in (c), above; and

(3) In the evaluation of human health in (2), above, use a cumulative risk approach that compares site-specific information to a cumulative risk of an excess lifetime cancer risk of one in 100,000 and a cumulative non-cancer risk that is a hazard index equal to one pursuant to the procedures prescribed in ASTM E 1739-95 or ASTM E 2081, as applicable, as noted in (c), above.

(e) In lieu of the soil standards in Table 600-2, the responsible party may use an activity and use restriction at a site where a department-approved remedial action relies on the restriction of site activities and uses to eliminate exposure pathways to achieve or maintain protection of human health and the environment pursuant to the procedures outlined in Env-Or 608.

(f) The soil standards in Table 600-2 shall not apply at sites where contamination is at or below background levels.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; amd by #9213, eff 7-23-08; ss by #10831, eff 6-1-15

Env-Or 606.20 Financial Assurance.

(a) If the remedial action plan proposes active remediation or active containment, or both, that will be ongoing for 10 or more years, the responsible party shall establish, implement, and maintain an approved financial assurance plan.

(b) The responsible party shall submit to the department for approval a financial assurance plan within 90 days following approval of the remedial action plan that includes:

- (1) A cost estimate prepared in accordance with (c), below;
- (2) Provisions for guaranteeing the cost of long-term remediation based on one or any combination of the options specified in Env-Or 606.21; and
- (3) For the options specified in Env-Or 606.21(a), the identity of the financial institution providing the guarantee.

(c) The remediation cost estimate shall:

- (1) Be itemized and documented to show the unit cost and quantity of each item, service, and activity required for operation and maintenance of the active remediation or active containment system, or both;
- (2) Be based on representative current market rates for having a third party perform all required remediation activities;
- (3) Be based on the time required to meet the criteria for issuance of a certificate of completion pursuant to Env-Or 609.01 or 30 years, whichever is less;
- (4) Include a line item for contingencies equaling no less than 10% of the total itemized costs; and
- (5) Be dated, signed, and sealed by the engineer of record.

(d) The responsible party shall demonstrate that it has obtained financial assurance within 30 days of receiving the department's approval of the financial assurance plan.

(e) The responsible party shall submit an update of the remediation cost estimate to the department for approval annually on a date stipulated in the groundwater management permit.

(f) If the updated remediation cost estimate required pursuant to (e), above, is greater than 10% more than the value of the financial assurance mechanism currently in effect, the responsible party shall obtain updated or replacement financial assurance in an amount consistent with the updated remediation cost estimate within 30 days of the department's approval of the cost estimate.

(g) The responsible party shall submit a revised financial assurance plan for department approval within 30 days of learning that any portion of its financial assurance is being cancelled or not renewed by the issuer.

(h) The responsible party shall demonstrate that it has obtained replacement financial assurance promptly upon receiving the department's approval of a revised financial assurance plan, but no later than 30 days before the cancellation or expiration date of the existing financial assurance.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 606.21 Financial Assurance Mechanisms.

(a) Financial assurance required pursuant to Env-Or 606.20(a) shall be provided in one, or any combination, of the following forms:

- (1) An irrevocable letter of credit issued for a period of at least one year from an institution whose operations are regulated and examined by a federal or New Hampshire state agency;
- (2) An insurance policy, except that insurance issued by an affiliated captive insurance company shall not be acceptable;
- (3) A surety bond issued by a surety company listed as an acceptable surety on federal bonds in Circular 570 of the U.S. Department of the Treasury;
- (4) A trust fund established in accordance with the laws of the state of New Hampshire; or
- (5) An alternate mechanism agreed to by the responsible party and the department that will ensure that the funds necessary to meet the remediation costs are available when they are needed.

(b) If using a surety bond, insurance policy, or letter of credit, the responsible party shall also establish a standby trust to receive the proceeds of the surety bond, insurance policy, or letter of credit.

(c) Each financial assurance instrument specified in (a) and (b), above, shall specifically identify the state of New Hampshire as the beneficiary.

(d) Funds held in trust accounts may be invested, but shall provide for the preservation of principal.

(e) Financial assurance documents shall be as described in 40 CFR 264.151, as applicable.

(f) Letters of credit shall include a provision to automatically extend the expiration date by at least one year unless the issuing institution notifies the responsible party and the department by certified mail, return receipt requested, of a decision to not extend the expiration date at least 120 days before the current expiration date.

(g) Insurance policies and surety bonds shall include a provision to prohibit any cancellation without prior notice of cancellation being sent to the responsible party and the department by certified mail, return receipt requested, at least 120 days before the effective date of cancellation.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

PART Env-Or 607 GROUNDWATER MANAGEMENT PERMITS

Env-Or 607.01 Groundwater Management Permit Required.

(a) A responsible party shall apply for and obtain a groundwater management permit for any site where:

- (1) The discharge of a regulated contaminant at that site has caused and continues to cause the groundwater quality criteria of Env-Or 603.01 to be violated; or
- (2) An unlined solid waste landfill regulated pursuant to RSA 149-M is located.

(b) The groundwater management permit shall:

- (1) Establish a groundwater management zone (GMZ);
- (2) Require implementation of measures to restore groundwater quality within the GMZ to meet groundwater quality criteria of Env-Or 603.01;
- (3) Control the use of groundwater within the GMZ;
- (4) Require monitoring of the groundwater quality within the GMZ; and
- (5) Require an evaluation of the effectiveness of remedial measures.

(c) A groundwater discharge permit issued pursuant to Env-Wq 402 shall not be required for discharges to groundwater associated with an approved remedial action provided a groundwater management permit has been issued for the site.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 607.02 Groundwater Management Permit Procedures.

(a) An applicant for a groundwater management permit shall obtain a groundwater permit application from the department and submit the completed application to the department:

- (1) Within 60 days following department approval of a remedial action plan; or
- (2) For cases where a remedial action plan is not required but groundwater quality continues to exceed the groundwater quality criteria specified in Env-Or 603.01, within 60 days of written notice from the department that a groundwater management permit is required pursuant to Env-Or 607.01(a)(1).

(b) The applicant for a groundwater management permit shall:

- (1) Also apply for all required local, state, or federal permits;



- (2) Provide notification on a form provided by the department by certified mail, return receipt requested, to all owners of properties specified in Env-Or 607.03(a)(20) that their property is proposed for inclusion within the GMZ;
- (3) Provide a copy of the complete permit application to the town/city clerk of the municipality in which the site is located;
- (4) Obtain rights of access necessary to conduct the approved remedial action;
- (5) Obtain any necessary rights as required pursuant to Env-Or 607.06(c) to restrict the use of water wells within the groundwater management zone; and
- (6) File documentation of the rights required by (5), above, in the registry of deeds.

(c) The responsible party shall submit the fee required by RSA 485:3-c with the permit application. If paid by check or money order, the instrument shall be made payable to the "Treasurer - State of New Hampshire".

(d) Within 90 days from receipt of a complete permit application, the department shall:

- (1) Issue a permit that is valid for a period of 5 years from the date of issuance and subject to renewal; or
- (2) Notify the applicant in writing that the information submitted is not sufficient to make a decision and request additional information from the applicant.

(e) If a groundwater management permit is issued, the permit shall contain conditions as are necessary to ensure implementation of the remedial action and monitoring of groundwater quality within the GMZ, including conditions for submitting periodic status reports as required by (f), below.

(f) The permittee shall submit periodic summary reports prepared in accordance with Env-Or 607.04 to summarize the effectiveness of the remedial measures and groundwater quality within the GMZ.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; amd by #9213, eff 7-23-08; ss by #10831, eff 6-1-15

Env-Or 607.03 Groundwater Management Permit Application.

(a) The applicant for a groundwater management permit shall provide the following information on or with a form obtained from the department:

- (1) The site name, address, property deed reference by county book and page, and property tax map and lot number, and the department site number;
- (2) The name, mailing address, daytime telephone number, and email address, if any, of the site owner;
- (3) If different from the site owner, the name, mailing address, daytime telephone number, and email address, if any, of the applicant;
- (4) The name, mailing address, daytime telephone number, and email address, if any, of a contact person for the applicant and, if available, a fax number;
- (5) A brief summary of the site investigation report;

- (6) A brief summary of remedial measures performed to date;
- (7) A plan scaled to fit onto an 8-1/2 inches by 11 inches or 11 inches by 17 inches sheet, using a tax map as a base, that identifies and locates to the extent ascertainable, the following:
  - a. The proposed GMZ boundary;
  - b. Any deeded easements which restrict the use of the groundwater within the GMZ;
  - c. Any streets within 1,000 feet of the site;
  - d. Any properties, including tax map and lot numbers, that are within the proposed GMZ or that abut the lots that are within the proposed GMZ;
  - e. Any surface water bodies on and within 500 feet of the GMZ;
  - f. Any lots with water supply wells, including type of use, within 500 feet of the GMZ; and
  - g. The location, elevation, and datum of a permanent and recoverable bench mark;
- (8) A site plan scaled to fit onto an 8-1/2 inches by 11 inches or 11 inches by 17 inches sheet prepared in accordance with Env-Or 606.04(m) that clearly identifies all proposed sampling locations;
- (9) A table of current water level measurements obtained from piezometers and monitoring wells used to develop the groundwater contours;
- (10) A table summarizing all monitoring results for the 5 years immediately preceding the application, if applicable, from existing monitoring points;
- (11) An updated list, including copies if not already submitted to the department, of any previously-completed investigations and reports pertinent to the site;
- (12) A summary table, if more than 3 previously-completed investigations and reports are available, that includes the following information:
  - a. The date of the report;
  - b. The consultant's name; and
  - c. The scope of the investigation;
- (13) A detailed proposal for a water quality monitoring program, including proposed monitoring schedule, parameters to be analyzed, monitoring locations, and supporting information justifying the locations, frequency and parameters selected;
- (14) Well construction details of monitoring wells and elevations of top of wells not previously referenced in the site investigation submitted under Env-Or 606.01;
- (15) Certification that application has been made for all required local, state, or federal permits;
- (16) Certification that notification has been provided to all owners of lots proposed for inclusion in the GMZ as required by Env-Or 607.02(b)(2);
- (17) Certification that a copy of the complete permit application has been provided to the town/city clerk of the municipality as required by Env-Or 607.02(b)(2);

(18) Documentation that rights of access necessary to conduct the approved remedial action have been obtained as required by Env-Or 607.02(b)(3);

(19) Documentation that any necessary rights as required by Env-Or 607.06(c) have been obtained to control the use of water wells within the GMZ and filed in the registry of deeds as required by Env-Or 607.02(b)(5) and (6); and

(20) A list of properties located within the GMZ that includes, for each property:

- a. The name and mailing address of the property owner(s) and, if available, a daytime telephone number;
- b. The property address;
- c. The deed reference, including county book and page; and
- d. The tax map and lot number.

(b) The groundwater management permit application shall be dated, signed, and sealed by the professional of record.

(c) The applicant shall sign the application form. Such signature shall constitute certification that all information provided on or with the form or that otherwise is submitted by the applicant as part of the application is true, complete, and not misleading to the knowledge and belief of the signer.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; amd by #9213, eff 7-23-08; ss by #10831, eff 6-1-15

#### Env-Or 607.04 Periodic Summary Reports.

(a) The periodic summary report required by Env-Or 607.02(f) shall include the following information as applicable:

- (1) A summary of work performed during the monitoring period including a description of the type and frequency of monitoring activities conducted;
- (2) An update of the site conceptual model, including current groundwater contour and contaminant distribution maps;
- (3) A tabular and graphical summary of groundwater quality and treatment system monitoring data showing trends in contaminant concentrations, including the cumulative mass of contaminant removed by the treatment system for the monitoring period;
- (4) An evaluation of progress towards meeting performance standards including any recommendations for remedial action revisions; and
- (5) A demonstration by the responsible party that the financial assurance requirements of Env-Or 606.20 and Env-Or 606.21 will continue to be available to meet the costs of the approved long-term remediation.

(b) The summary report shall be dated, signed, and sealed by the professional of record.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 607.05 Establishing the GMZ.

(a) The GMZ boundary delineation shall be supported by hydrogeologic data and include an examination of the following:

- (1) The geologic characteristics of the site;
- (2) The estimated groundwater flow patterns at the site;
- (3) Contaminant transport and degradation mechanisms;
- (4) Boundaries by induced hydraulic gradient control;
- (5) Natural hydrogeologic boundaries such as groundwater divides or surface water bodies; and
- (6) Boundaries created by natural attenuation of contamination.

(b) The boundaries of the GMZ shall be denoted by clearly identifiable physical features or surveyed metes and bounds unless the boundaries coincide with existing property lines.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 607.06 Monitoring and Use of Groundwater Within a GMZ.

(a) Where drinking water supply wells located within the GMZ are contaminated above the groundwater quality criteria of Env-Or 603.01, the permittee shall provide a potable drinking water supply that meets applicable federal and state water quality criteria.

(b) For water supply wells located within the GMZ that are not contaminated above groundwater quality criteria of Env-Or 603.01, the permittee shall:

- (1) Monitor drinking water quality as part of the permit; and
- (2) Establish and implement contingency provisions to provide a potable drinking water supply that meets applicable federal and state water quality criteria in the event a well becomes contaminated above the groundwater quality criteria of Env-Or 603.01.

(c) Use of groundwater within the GMZ for drinking water shall be restricted by recorded easement or other form of ownership interest or restriction, except where potable water is available or is provided to all lots of record by the permittee.

(d) Where an undeveloped lot with no drinking water supply is included in the GMZ, the permittee shall contact the property owner annually to determine if a water supply has been developed.

(e) Within 30 days of discovery of a new drinking water supply well within the GMZ, the permittee shall:

- (1) Provide written notification of such well to the department that includes the drinking water supply well owners name, mailing address, property tax map and lot number and deed reference by county book and page; and
- (2) Sample the supply well, with all sampling, analysis and reporting conducted in accordance with Env-Or 610.02 and Env-Or 610.03.

(f) Groundwater extraction within the GMZ shall be restricted by a recorded easement or other form of ownership interest or restriction if required to implement an approved remedial action.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 607.07 Groundwater Management Permit Compliance Criteria.

(a) No violation of groundwater quality criteria shall be allowed outside the boundary of the GMZ.

(b) The permittee shall notify the department in writing within 30 days of discovery of a violation of groundwater quality criteria at or beyond the GMZ boundary as evidenced by required permit monitoring.

(c) Within 60 days of discovery of a violation of groundwater quality criteria at or beyond the GMZ boundary, the permittee shall submit recommendations to correct the violation to the department for approval. The department shall approve the recommendations if the department determines that they will correct the violation.

(d) The permittee shall monitor and manage groundwater in compliance with the permit conditions until groundwater contamination sources are eliminated and compliance with groundwater quality criteria is achieved after accounting for seasonal, atmospheric, and hydrogeologic variability.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 607.08 Permit Notification.

(a) Within 15 days after the department issues the groundwater management permit, the permittee shall provide notice of the permit by certified mail, return receipt requested, to all owners of lots of record within the GMZ.

(b) Within 45 days after the department issues the groundwater management permit, the permittee shall submit documentation of the notification required by (a), above, to the department.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #9213, eff 7-23-08; ss by #10831, eff 6-1-15

Env-Or 607.09 Recordation.

(a) The permittee shall record notice of the permit on a form provided by the department at the appropriate registry of deeds in the chain of title for each lot within the GMZ within 60 days after the department issues the groundwater management permit.

(b) The permittee shall submit a copy of the recorded notice(s) to the department and to the governing body of each municipality in which the site or any lot with the GMZ is located within 30 days of recordation.

(c) The notice of permit shall include the following:

- (1) The name and mailing address of the permittee;
- (2) The lot owner's name, address, tax map and lot numbers and property deed reference by county book and page numbers;
- (3) The permit number and date the permit was approved;

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- (4) A statement that the permit is available for review at the department; and
- (5) A statement that the notice of permit will remain in effect until the department issues a release of recordation.
- (d) The permittee shall sign the notice of permit prior to recording it.
- (e) The permittee may record one notice that includes all lots or a separate notice for each lot.
- (f) The department shall issue a release of recordation to the permittee once groundwater quality within the GMZ meets the groundwater quality criteria of Env-Or 603.01.
- (g) The permittee shall record the release of recordation issued pursuant to (e), above, in the registry of deeds in the chain of title for the lot(s) designated in the release within 60 days of receipt of the release of recordation from the department.
- (h) Within 30 days of recordation, the permittee shall submit a copy of the recorded release of recordation to the department and to the governing body of each municipality in which the site or any lot with the GMZ is located.
- (i) Recordation requirements shall not apply to publicly owned roadways or railroad rights of ways for which there is no chain of title.
- (j) The department shall record a release of recordation if the permittee is unwilling or unable to record the release pursuant to (f), above.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 607.10 Permit Renewal.

- (a) The permittee shall apply for a permit renewal prior to its expiration date but no more than 90 days prior to expiration.
- (b) The permittee shall continue to comply with all conditions in the current permit until:
  - (1) The permit is renewed; or
  - (2) The department issues a certificate of no further action pursuant to Env-Or 609.02.
- (c) The applicant for renewal shall provide the following information on a form obtained from the department:
  - (1) The site name, address, property deed reference by county book and page and property tax map and lot numbers, and the department site number;
  - (2) The name, mailing address, daytime telephone number, and email address, if any, of the site owner;
  - (3) If different from site owner, the name, mailing address, daytime telephone number, and email address, if any, of the permittee;
  - (4) The name, mailing address, and daytime telephone number of the contact person for the site and, if available, a fax number and e-mail address;

- (5) A table summarizing all monitoring results for the 5 years immediately preceding the renewal application from existing monitoring points with an assessment of any trends shown by the data;
  - (6) A summary of remedial measures performed and an update on the performance of measures conducted;
  - (7) Recommendation for any revisions to the current permit;
  - (8) A plan(s) scaled to fit onto an 8-1/2 inches by 11 inches or 11 inches by 17 inches sheet, using a tax map as a base, that identifies and locates to the extent ascertainable, the following:
    - a. The proposed GMZ boundary;
    - b. Any properties, including tax map and lot numbers, within and abutting the lots on which the proposed GMZ is located;
    - c. All proposed sampling locations; and
    - d. Current groundwater contours referenced to a table of current water level measurements obtained from piezometers and monitoring wells used to develop the contours; and
  - (9) Certification that a copy of the completed permit renewal application has been provided to the town/city clerk of the municipality in which the site is located.
- (d) The permit renewal application shall be dated, signed, and sealed by the professional of record.
- (e) The applicant shall sign the application form. Such signature shall constitute certification that all information provided on or with the form or that otherwise is submitted by the applicant as part of the application is true, complete, and not misleading to the knowledge and belief of the signer.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 607.11 Permit Modification.

- (a) A permittee who wishes to request a permit modification shall submit a written request to the department that includes:
- (1) The reasons for the modification;
  - (2) A table summarizing all monitoring results to date from existing monitoring points; and
  - (3) A demonstration that the permit as modified will result in compliance with Env-Or 607.01(b) and Env-Or 607.07.
- (b) The department shall modify the permit or deny the request within 90 days of receipt of the request. If the department denies the request, the department shall send the permittee a written notice that states the reason(s) for the denial.
- (c) The department shall modify the permit if the applicant can demonstrate that compliance with the permit as modified will result in compliance with Env-Or 607.01(b) and Env-Or 607.07.
- (d) The department shall initiate a procedure under RSA 541-A:30 to modify a permit without request by the permittee if the department determines that:

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- (1) Issuance of the permit was based on false or misleading information and the permit would not have been issued if the information had been true and not misleading;
- (2) Modification of the permit is necessary to ensure protection of human health and the environment; or
- (3) Modification of the permit is necessary to ensure compliance with Env-Or 607.01(b) and Env-Or 607.07.

(e) To initiate a permit modification procedure, the department shall provide the permittee with written notice that:

- (1) Identifies the site by name, department identification number, location, and permit number;
- (2) Explains each action the department proposes to take and the reasons for each proposed action;
- (3) Identifies the department's authority for taking such an action;
- (4) Explains the opportunity for an adjudicative hearing and related deadlines; and
- (5) Lists the name, title, mailing address, and telephone number of the department representative who may be contacted regarding the notice.

(f) An adjudicative hearing on a permit modification initiated by the department pursuant to (e), above, shall:

- (1) Be requested by the permittee to the department in writing within 30 days of receipt of the notice from the department; and
- (2) Proceed in accordance with Env-C 200 as applicable to adjudicative proceedings.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 607.12 Permit Transfer.

(a) Subject to (f), below, prior to the transfer of a groundwater management permit to a new permittee, the current permittee shall file a written request for the transfer with the department on a form provided by the department.

(b) A transfer request shall include the following information:

- (1) The department permit number;
- (2) The site name, address, and tax map and lot number;
- (3) The name, mailing address, daytime telephone number, and email address, if any, of the new permittee;
- (4) The name, mailing address, daytime telephone number, and email address, if any, of the current permittee; and
- (5) A summary of all monitoring results to date.



(c) Subject to (f), below, the current permittee and the person to whom the permit is proposed to be transferred shall sign the transfer request. Such signatures shall constitute certification that the information contained in the request is correct, complete, and not misleading to the knowledge and belief of the signer and that the signer agrees to comply with all requirements of the permit and all applicable rules.

(d) Within 45 days of receiving a request for transfer, the department shall approve or deny the transfer request and notify both parties of its decision in writing.

(e) The department shall deny an application to transfer a permit if:

(1) The permittee is not presently in compliance with the permit, this chapter, or any other applicable statute or rules, unless transferring the permit would facilitate returning the facility to compliance;

(2) The permittee fails to pay any outstanding penalties or fines issued under RSA 146-A, RSA 146-C, or RSA 147-A, unless all outstanding amounts will be paid in conjunction with the transfer;

(3) The permittee fails to pay any outstanding invoice associated with the department's recoverable cost pursuant to RSA 146-A, RSA 146-C, RSA 147-A, or RSA 147-B, unless all outstanding amounts will be paid in conjunction with the transfer; or

(4) The permittee has failed to perform in accordance with a court order, consent decree, or other settlement agreement relating to the property subject to the groundwater permit, unless transferring the permit would facilitate such performance.

(f) If the current permittee is unable or unwilling to file a written request for the transfer with the department, the new permittee may file the request. If the new permittee files the request pursuant to this paragraph, the signature of the current permittee shall not be required.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

## PART Env-Or 608 ACTIVITY AND USE RESTRICTIONS

### Env-Or 608.01 Implementation of an Activity and Use Restriction (AUR).

(a) An activity and use restriction (AUR) shall be implemented at sites where a department-approved remedial action relies on the restriction of site activities and uses to achieve or maintain protection of human health and the environment.

(b) An AUR shall:

(1) Establish prohibited and accepted site activities and uses to achieve or maintain protection of human health and the environment;

(2) Be incorporated either in full or by reference into all deeds, easements, mortgages, leases, licenses, occupancy agreements, or any other instruments conveying an interest in, or a right to use the property, or both;

(3) Run with the land so as to be the responsibility of the property owner upon recordation;

(4) Provide notice to holders of any interest in the site of the existence and location of contamination subject to the restriction; and

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(5) Establish a duty to evaluate risks associated with proposed changes in site activities and uses prior to any such change in accepted activities and uses.

(c) The property owner shall notify the department in writing within 30 days of a discovery of a violation of any condition of a department-approved AUR recorded pursuant to Env-Or 608.05.

(d) Within 60 days of discovery of a violation pursuant to (c), above, a property owner shall submit recommendations to correct the violation to the department for approval, including a corrective action plan and a schedule for implementing the plan. The department shall approve the plan if it determines that the plan, if implemented, will correct the violation.

(e) The department shall send a self-certification form to the owner of a lot on which an AUR has been recorded pursuant to this part on a schedule approved in the remedial action for the site.

(f) Within 30 days of receipt of the self-certification form, the owner at the time of notice shall:

(1) Sign the form to certify that all conditions of the department-approved AUR are being met; and

(2) Return the signed form to the department.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 608.02 AUR Procedures.

(a) An applicant for an AUR shall obtain an application from the department and submit the completed application to the department within 90 days following department approval of a remedial action that relies on an AUR.

(b) Within 90 days from receipt of an AUR application, the department shall:

(1) Notify the applicant in writing of its decision to approve or deny the application; or

(2) If the application does not contain sufficient information to make a decision, request additional information from the applicant.

(c) The department shall approve an AUR application if the application contains all items required by Env-Or 608.03 and the proposed AUR is consistent with Env-Or 608.01(b).

(d) An AUR that is approved by the department shall become effective upon recordation.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 608.03 AUR Application.

(a) The applicant for an AUR shall provide the following to the department:

(1) All information required by the AUR application form obtained from the department;

(2) Where the AUR applies to an entire lot, at least one of the following:

a. A recordable plan of the site prepared by a New Hampshire registered land surveyor;

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- b. A reference by book and page number to a survey plan of the lot that has been recorded or registered in the registry of deeds for the county in which the site is located; or
  - c. A reference by book and page number to a property description of the lot that has been recorded or registered in the registry of deeds for the county in which the site is located;
- (3) Where the area subject to the AUR comprises only a portion of a lot, the following:
- a. A metes and bounds description of the restricted area; and
  - b. A recordable plan, prepared by a New Hampshire registered land surveyor, that shows the location of the restricted area in relation to the property boundaries of the site;
- (4) The time period during which the AUR shall be effective;
- (5) A precise description of the site activities and uses that will be prohibited on the site and allowed on the site;
- (6) A description of how the restrictions will eliminate the risks to human health and the environment;
- (7) A precise description of the measures which will be taken to ensure compliance of the activity and use restriction;
- (8) A description of the procedures to be followed when an emergency requires immediate excavation of contaminated soil to repair utility lines or other infrastructure on the site, or to respond to other types of emergencies that might result in a significant risk to human health, evaluated pursuant to the procedure specified in Env-Or 606.19(d)(2) and (3), from exposure to contaminants at the site, which includes:
- a. Notifying the department of such emergency condition;
  - b. Limiting disturbance of contaminated media to the minimum necessary to adequately respond to the emergency;
  - c. Undertaking specified precautions to reduce exposure of workers and neighbors of the site, to contaminated media; and
  - d. Preparation and implementation of a written plan for restoring the site to a condition consistent with the activity and use restrictions;
- (9) An acknowledgment by the applicant that the AUR shall run with the land pursuant to Env-Or 608.01(b)(3);
- (10) An analysis of the long-term feasibility of maintaining such AUR;
- (11) An acknowledgement by the applicant to incorporate either in full or by reference the AUR into all deeds, easements, mortgages, leases, licenses, occupancy agreements, or any other instruments conveying an interest in and/or a right to use the property pursuant to Env-Or 608.01(b)(2);
- (12) The procedures for modifying and terminating the AUR pursuant to Env-Or 608.06, and Env-Or 608.07;
- (13) Title reference by which the property owner(s) acquired title to the property; and

(14) The proposed AUR document that will be recorded if the AUR application is approved.

(b) The applicant shall sign the application form. Such signature shall constitute certification that all information provided on or with the form or that otherwise is submitted by the applicant as part of the application is true, complete, and not misleading to the knowledge and belief of the signer.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 608.04 AUR Notification.

(a) Within 30 days of the date on which the department approves the AUR application pursuant to Env-Or 608.02(c), the applicant shall provide notice to current holders of any interest in the site of the existence and location of the contamination subject to the AUR.

(b) Notice sent pursuant to (a), above, shall be:

- (1) On a form provided by the department; and
- (2) Sent by certified mail, return receipt requested.

(c) Within 60 days of the date on which the department approves the AUR application pursuant to Env-Or 608.02(c), the applicant shall submit documentation of the notification required in (a), above, to the department.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 608.05 AUR Recordation.

(a) Within 60 days of the date on which the department approves the AUR application pursuant to Env-Or 608.02(c), the applicant shall:

- (1) Sign and acknowledge the document; and
- (2) Record the AUR document and a site plan prepared in accordance with Env-Or 608.03(a)(2) or (a)(3), as applicable, in the registry of deeds in the chain of title for each lot that is subject to the AUR.

(b) Within 30 days of recordation, the applicant shall submit a copy of the recorded AUR document and site plan to the department and the governing body of the municipality in which the site is located.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 608.06 AUR Modifications.

(a) The property owner shall submit any proposed modification of an AUR and obtain department approval of the modification pursuant to Env-Or 608.03 before implementing any change in activity on or use of the property that is subject to the AUR.

(b) If proposed changes in site activities or uses necessitate additional remedial actions to protect human health or the environment, the property owner shall complete such remedial actions before the new or altered activities commence.

(c) Within 60 days of receipt of the department's approval, the property owner shall record the modified AUR in the registry of deeds in the chain of title for the lot that is subject to the AUR. The modification shall not take effect until so recorded.

(d) Within 30 days of recordation, the property owner shall submit a copy of the recorded modified AUR to the department and the governing body of the municipality in which the site is located.

(e) Within 30 days of the date on which the department approves an AUR modification, the property owner shall provide notice to current holders of any interest in the site on a form provided by the department sent by certified mail, return receipt requested, of the existence and location of the contamination that is subject to the AUR.

(f) Within 60 days of the date on which the department approves an AUR modification, the property owner shall submit documentation of the notification required in (e), above, to the department.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 608.07 AUR Termination and Release of Recordation.

(a) In cases where an AUR is no longer necessary to achieve or maintain protection of human health and the environment, the property owner shall submit a request to terminate the AUR to the department in writing with supporting information that demonstrates the AUR is no longer necessary to achieve or maintain protection of human health and the environment.

(b) The department shall issue a release of recordation for the AUR to the property owner upon determining that the AUR is no longer necessary to achieve or maintain protection of human health and the environment.

(c) Within 60 days of receipt of a release of recordation from department, the property owner shall record the release of recordation notice of the AUR in the registry of deeds in the chain of title for the lot designated.

(d) Within 30 days of recordation, the property owner shall submit a copy of the recorded release of recordation notice to the department and the governing body of the municipality in which the site is located.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

PART Env-Or 609 CERTIFICATES OF COMPLETION OR NO FURTHER ACTION

Env-Or 609.01 Certificate of Completion.

(a) Upon completion of the remedial action, the responsible party may request the department to issue a certificate of completion.

(b) The department shall issue the requested certificate of completion if:

- (1) All activities specified in the approved remedial action, with the exception of groundwater monitoring, have been completed;
- (2) The performance standards specified for the approved remedial action and the groundwater management permit have been achieved;
- (3) All monitoring requirements under the groundwater management permit are being met;

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- (4) Any necessary activity and use restrictions have been implemented;
- (5) All penalty(ies) or fine(s) issued under RSA 146-A, RSA 146-C, RSA 147-A, and RSA 485-C have been paid;
- (6) All invoices associated with the department's recoverable costs pursuant to RSA 146-A, RSA 146-C, RSA 147-A, RSA 147-B, and RSA 485-C have been paid; and
- (7) All fees and costs due under RSA 147-F have been paid.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 609.02 Certificate of No Further Action. The department shall issue a certificate of no further action, which certifies that no additional investigation, remedial measures, or groundwater monitoring will be required by the department, if:

- (a) All human health hazards associated with direct exposure to contaminants through dermal contact, ingestion, and inhalation have been eliminated;
- (b) All necessary activity and use restrictions have been implemented;
- (c) All sources of groundwater contamination have been eliminated;
- (d) All on-site and off-site dissolved contamination levels meet groundwater quality criteria as specified in Env-Or 603.01;
- (e) All recorded release of recordation notices are on file with the department as required by Env-Or 607.09;
- (f) All penalty(ies) or fine(s) issued under RSA 146-A, RSA 146-C, RSA 147-A, and RSA 485-C have been paid;
- (g) All invoices associated with the department's recoverable cost pursuant to RSA 146-A, RSA 146-C, RSA 147-A, RSA 147-B, and RSA 485-C have been paid; and
- (h) All fees and costs due under RSA 147-F have been paid.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

### PART Env-Or 610 MONITORING AND REPORTING

Env-Or 610.01 Applicability. All sampling, analyses, and reporting required under Env-Or 600 shall be in accordance with this part unless otherwise specified.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

#### Env-Or 610.02 Sampling and Analysis.

- (a) At all sites that are subject to Env-Or 600, the responsible party shall:
  - (1) Monitor groundwater quality at all sites to ensure that groundwater quality complies with the terms of the permit, if any, and the groundwater quality criteria specified in Env-Or 603.01;

- (2) Monitor surface water points and water supply wells to ensure that water quality complies with applicable water quality standards and the terms of the permit, if any;
- (3) Monitor sampling points in the active remediation system to ascertain that design treatment efficiencies are achieved;
- (4) Install at least one hydraulically upgradient groundwater monitoring well to monitor ambient groundwater quality; and
- (5) Operate and maintain the monitoring wells, piezometers, and other measurement, sampling, and analytical devices so that they perform to design specifications throughout the life of the monitoring program.

(b) The parameters to be monitored shall be determined on a site-specific basis depending on the regulated contaminants present in the discharge or contaminated area.

(c) The frequency and location of water quality monitoring shall be determined on a site-specific basis depending on the hydrogeologic and contaminant characteristics of the site, predicted rates of groundwater flow, and treatment methods employed.

(d) Analyses shall be performed by a laboratory certified by the U.S. Environmental Protection Agency (US EPA) or the department pursuant to Env-C 300.

(e) Sampling shall be performed in accordance with the following references, available as noted in Appendix B, as applicable:

- (1) "Practical Guide for Ground-Water Sampling," document identification number EPA/600/2-85/104, US EPA, dated September 1985;
- (2) "RCRA Ground-Water Monitoring: Draft Technical Guidance," document identification number PB87107751, US EPA, dated November 1992;
- (3) "Standards Related to Environmental Sampling", 5<sup>th</sup> Edition, document identification number ASTM SAMP14, dated 2014 (ASTM SAMP14);
- (4) "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition" document identification number EPA/625/R-96/010b, US EPA, dated January 1999;
- (5) "SW 846 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", US EPA, dated February 2007; and
- (6) "Standard Guide for Sampling Waste and Soils for Volatile Organic Compounds" document identification number ASTM D 4547-2009, dated 2009.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 610.03 Reporting.

(a) The responsible party shall submit the results of all required sampling and analysis, including quality assurance and quality control results, to the department no later than 45 days after the sampling date, except as provided for in (b) and (c), below.

(b) Within 5 business days after receiving results, the responsible party shall submit all water supply well results that show a violation of the AGQS in writing to the department and the owner of the property on which the water supply well is located.

(c) Within 5 business days after receiving results, the responsible party shall submit all indoor air quality results that indicate a significant risk to human health in writing to the department and the owner of the property.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 610.04 Groundwater Monitoring Wells.

(a) Each monitoring well shall be designed, installed, developed, maintained, and decommissioned in accordance with We 100-1000 and the practices described in:

(1) “Standards on Environmental Site Characterization” Fourth Edition, document identification number ASTM SITECD10, dated 2010, available as noted in Appendix B; and

(2) ASTM ENVSAMP14, available as noted in Appendix B.

(b) Each monitoring well shall be:

(1) Constructed, maintained, and decommissioned only by a New Hampshire-licensed water well contractor holding a valid technical drillers license under RSA 482-B;

(2) Developed prior to sampling; and

(3) Allowed to equilibrate a minimum of 2 weeks following installation prior to sampling.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

PART Env-Or 611 CONTAMINATED SOIL

Env-Or 611.01 Requirements for Managing Contaminated Soils.

(a) The responsible party shall manage contaminated soils in a manner that protects human health and the environment.

(b) The responsible party shall manage contaminated soils in accordance with applicable local, state and federal requirements including but not limited to:

(1) RSA 147-A and rules adopted pursuant thereto, relative to management of hazardous waste;

(2) RSA 149-M and rules adopted pursuant thereto, relative to management of solid waste;

(3) RSA 485, RSA 485-A, and RSA 485-C and rules adopted pursuant thereto, relative to protection of groundwater; and

(4) RSA 482-A and rules adopted pursuant thereto, relative to the protection of wetlands.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15



Env-Or 611.02 Definitions.

(a) “Non-hazardous oil-contaminated soil (NOCS)” means soil that:

- (1) Is contaminated with oil;
- (2) Is not a hazardous waste as defined in RSA 147-B:2, VII; and
- (3) Is certified in accordance with Env-Or 611.03.

(b) “Non-hazardous contaminated soil (NCS)” means soil that:

- (1) Contains a regulated contaminant;
- (2) Is not a hazardous waste as defined in RSA 147-B:2, VII; and
- (3) Cannot be certified as NOCS pursuant to Env-Or 611.03.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 611.03 Non-hazardous Oil-Contaminated Soil (NOCS) Certification.

(a) Contaminated soils associated with a discharge of oil shall be evaluated as described in this section to determine if the soils can be certified as NOCS.

(b) The responsible party shall complete a summary of site ownership history and history of use at the site.

(c) The responsible party shall retain an environmental consultant or environmental contractor to observe the site and the soil and review the summary of site ownership history and history of use provided by the responsible party pursuant to (b), above.

(d) The soil shall be certified as NOCS by the responsible party’s environmental consultant or environmental contractor if:

- (1) The contaminated soils are derived from an oil discharge from a household or from underground storage facilities regulated under RSA 146-C; and
- (2) A history of site ownership and operation based on documented land use in accordance with ASTM E 1527 reveals no known activity that might have caused the soil to become contaminated with a hazardous waste as defined in RSA 147-B:2, VII.

(e) If contaminated soils are not generated from households or from underground storage facilities regulated under RSA 146-C, or a history of site ownership and operation based on documented land use in accordance with ASTM E 1527 reveals some activity that might have caused the soil to become contaminated with a hazardous waste as defined in RSA 147-B:2, VII, the responsible party shall conduct a hazardous waste determination in accordance with Env-Hw 100 et seq.

(f) The contaminated soil sampled pursuant to (e), above, shall be certified as NOCS by the responsible party’s environmental consultant or environmental contractor only if the testing indicates the soil is not a hazardous waste as defined in RSA 147-B:2, VII.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 611.04 Contaminated Soil Sampling. NOCS or NCS destined for off-site treatment or disposal shall be sampled and analyzed in accordance with the following prior to transportation off-site:

(a) Subject to (c), below, for stockpiled contaminated soils destined for off-site treatment or disposal, the responsible party shall collect representative samples in accordance with the following:

- (1) At least one composite sample shall be collected for every 200 tons destined for off-site treatment or disposal up to 2,000 tons, plus at least one composite sample for every 500 tons above the initial 2,000 tons;
- (2) Each composite sample shall consist of at least 8 discrete samples collected from the stockpile; and
- (3) Each discrete sample shall be taken from newly exposed soil a minimum of 12 inches deep within the stockpile and combined with the other required discrete samples to complete each composite sample;

(b) Subject to (c), below, for in-situ contaminated soils destined for off-site treatment or disposal, the responsible party shall collect representative samples in accordance with the following:

- (1) At least one boring/test pit shall be completed for every 200 tons destined for off-site treatment or disposal up to 2,000 tons, plus at least one boring/test pit for every 500 tons above the initial 2,000 tons;
- (2) The borings/test pits required by (1), above, shall be completed on an evenly-spaced grid pattern throughout the contaminated soil area;
- (3) At least one boring/test pit shall be located in the most contaminated soil area;
- (4) At least one soil sample shall be collected from the contaminated zone of each boring/test pit required by (1) through (3), above;

(c) If the quantity of NOCS is less than 50 tons, sampling and analysis shall not be required except as required by the receiving facility; and

(d) Representative soil samples collected in accordance with (a) or (b), above, shall be analyzed for the chemicals of potential concern as identified through a history of site ownership and operation based on documented land use in accordance with ASTM E 1527 and previous sampling, and in accordance with the receiving facility's requirements.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 611.05 Contaminated Soil Storage.

(a) NOCS or NCS exceeding the soil remediation standards in Table 600-2 awaiting off-site disposal may be temporarily stored at the site of origin for a period not to exceed 4 months.

(b) NOCS or NCS shall be stored in a manner that prevents the soil from coming in contact with the ground, precipitation, and storm water run-off, for example on and covered with an impermeable material that is chemically compatible with the contamination.

(c) The contaminated soil pile shall only be uncovered when contaminated soil is being added to or removed from the pile.

(d) Public access to the contaminated soil pile storage area shall be restricted.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 611.06 Contaminated Soil Disposal and Reuse.

(a) Except as provided for by (b) and (c) below, all NOCS or NCS that exceed the soil remediation standards in Table 600-2 shall be either:

(1) Managed on-site in accordance with a remedial action approved by the department pursuant to Env-Or 606.03; or

(2) Removed from the site to an authorized treatment or disposal facility holding all requisite federal, state, or local permits, licenses, or approvals.

(b) NOCS or NCS that exceeds the soil remediation standards listed in Table 600-2 but meets site-specific standards developed in accordance with Env-Or 606.19 may be managed on the site.

(c) NOCS or NCS that exceeds the soil remediation standards listed in Table 600-2 but is managed in accordance with a department-approved AUR implemented in accordance with Env-Or 608 may be managed on the site.

(d) NOCS or NCS that meets the soil remediation standards listed in Table 600-2 may be left in place or reused on site, or removed from the site to an authorized treatment or disposal facility holding all requisite federal, state, or local permits, licenses, or approvals.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 611.07 Hazardous Waste Contaminated Soil Storage, Treatment, and Disposal. Soils characterized as a hazardous waste shall be stored, treated, and disposed of in accordance with RSA 147-A and Env-Hw 100 et seq.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

PART Env-Or 612 WAIVERS

Env-Or 612.01 Purpose. The purpose of the rules in this part is to establish procedures and criteria for requesting a waiver from one or more requirements established in Env-Or 600.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15

Env-Or 612.02 Definition. For purposes of this part, the following definition shall apply:

(a) “Site remediation program” means the program implemented by the department to ensure and oversee the investigation, management, and remediation of sites contaminated by regulated contaminants in order to facilitate the efficient remediation of such sites.

Source. #10831, eff 6-1-15

Env-Or 612.03 Initiating a Waiver Request.

(a) Any owner or responsible party (RP) who wishes to request a waiver of one or more specific requirements established in this chapter shall submit the information specified in Env-Or 612.03 in writing to the department.

(b) If the person who is requesting the waiver is not the owner of the property, the requestor shall:

(1) Seek the concurrence of the site owner in advance of submitting the request to the department; and

(2) State in the request submitted to the department whether the site owner concurs with the request.

(c) If there is more than one RP and all of the RPs are not joining in the waiver request, the requestor shall:

(1) Seek the concurrence of each non-participating RP in advance of submitting the request to the department; and

(2) For each non-participating RP, state in the request submitted to the department whether the RP concurs with the request.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 612.02)

Env-Or 612.04 Information Required for Waiver Request. A request for a waiver shall include the following information:

(a) A description of the site to which the waiver request relates, including name, address, and department site number;

(b) The name, mailing address, daytime telephone number, and email address, if any, of the requestor and whether the requestor is the site owner or an RP;

(c) The name, mailing address, daytime telephone number and email address, if any, of the site owner, if other than the requestor, and of each other RP, if any;

(d) Identification of the rule for which a waiver is being sought;

(e) A full explanation of why a waiver is being requested, including an explanation of the economic and operational consequences of complying with the rule as written;

(f) A full explanation of the alternative(s) proposed to be implemented in lieu of complying with the rule(s) for which a waiver is sought, if any, with backup data for support;

(g) A statement of whether the requested waiver can be of limited duration; and

(h) A full explanation of how granting the requested waiver would meet the criteria specified in Env-Or 612.07(b).

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 612.03)

Env-Or 612.05 Signatures Required for Waiver Request.

- (a) The person(s) requesting the waiver shall authorize an individual to sign and date the request.
- (b) The authorized individual shall sign and date the request and print or type his or her name and title by the signature.
- (c) The signature shall constitute certification that:
  - (1) The information provided is true, complete, and not misleading to the knowledge and belief of the signer; and
  - (2) The signer understands that:
    - a. The submission of false, incomplete, or misleading information is grounds for denying the waiver request or revoking any waiver that is granted based on the information; and
    - b. He or she is subject to the penalties specified in New Hampshire law, currently RSA 641:3, for making unsworn false statements.

Source. #10831, eff 6-1-15

Env-Or 612.06 Submittals by Non-Concurring Persons.

- (a) If the site owner is not the requestor and does not concur with the request, the site owner may submit information in writing to the department as to why the requested waiver should not be granted.
- (b) If there is more than one RP and one or more RPs do not concur with the request, the non-concurring RPs may submit information in writing to the department as to why the requested waiver should not be granted.
- (c) Any information submitted pursuant to (a) or (b), above, shall be filed within 20 days of the date the waiver request was filed, provided that if the 20<sup>th</sup> day falls on a Saturday, Sunday, or state legal holiday the deadline shall be the first business day thereafter.

Source. #10831, eff 6-1-15

Env-Or 612.07 Department Action on Waiver Request.

- (a) The department shall review each waiver request and any information submitted pursuant to Env-Or 612.06 that relates to the request.
- (b) The department shall grant a waiver if it determines that:
  - (1) The requirement to be waived is not established by statute, unless the statute that establishes the requirement expressly authorizes the department to grant waivers of the requirement;
  - (2) Granting a waiver will not result in any adverse effect on human health or the environment; and
  - (3) Granting a waiver is consistent with the purpose of the site remediation program.
- (c) The department shall include such conditions, including time limitations, as are necessary to ensure that the activities conducted pursuant to the waiver will meet the criteria specified in (b), above.

(d) The department shall issue a written response to a request for a waiver within 60 days of receipt of the request. If the request is denied, the written response shall specify the reason(s) for the denial. If information was submitted by a non-concurring owner or RP pursuant to Env-Or 612.05 and a waiver is granted, the written response shall explain why the objections did not warrant denying a waiver.

Source. (See Revision Note at chapter heading for Env-Or 600) #8812, eff 2-1-07; ss by #10831, eff 6-1-15 (from Env-Or 612.03)

PART Env-Or 613 FEES FOR EXPEDITED REVIEW OF ENVIRONMENTAL SITE ASSESSMENT REPORTS

Env-Or 613.01 Determination of Property Valuation and Fees.

(a) The department shall determine the equalized assessed valuation of the property for which an expedited review of the environmental site assessment report is sought by dividing the assessed value of the property as determined by the municipality by the municipality's most recent equalization ratio.

(b) As specified in RSA 485:3-b, I, the fee shall be determined based on the equalized assessed valuation as shown in Table 600-3:

Table 600-3: Expedited Review Fee Based on Equalized Assessed Valuation

<b>Equalized Assessed Valuation</b>	<b>Fee</b>
\$0 to \$250,000	\$1,800
\$250,001 to \$500,000	\$2,250
\$500,001 to \$1,000,000	\$3,750
greater than \$1,000,000	\$7,500

Source. #9213, eff 7-23-08; ss by #10831, eff 6-1-15

**Appendix A: State Statutes Implemented**

<b>Rule Section(s)</b>	<b>State Statute Implemented</b>
Env-Or 600 (see below for additional statutes)	RSA 146-A:3-a; RSA 146-C:11; RSA 147-A:9; RSA 147-F:11-13 & 15; RSA 485-C:1, 6, 6-a, & 6-b
Env-Or 601	RSA 146-A:11-c; RSA 146-C:9; RSA 147-A:3; RSA 147-F:18; RSA 485-C:4
Env-Or 602	RSA 146-A:11-c; RSA 146-C:9; RSA 147-A:3; RSA 147-F:18; RSA 485-C:4
Env-Or 603	RSA 485-C:4, III
Env-Or 603.03(b) and (c) intro & Table 600-1	RSA 485:16-e; RSA 485-C:4, III; RSA 485-C:6, V & VI
Env-Or 603.03(c) intro & Table 600-1	RSA 485-C:6, I
Env-Or 604.01 - 604.03	RSA 485-C:4, IX; RSA 485-C:14-b
Env-Or 604.04	RSA 147-A:11
Env-Or 604.05 - 604.08	RSA 146-A:5; RSA 146-C:11, I-a
Env-Or 605.01	RSA 146-A:11-C, V-a, RSA 146-C:9-X; RSA 146-C:9-XI; RSA 147-A:3-VII; RSA 485-C:4, VIII
Env-Or 605.02	RSA 147-A:3
Env-Or 605.03	RSA 146-A:11-C, V-a; RSA 146-C:9-X; RSA 146-C:9-XI
Env-Or 605.04 - 605.09	RSA 146-A:11-C, V-a; RSA 146-C:9-X; RSA 146-C:9-XI, RSA 147-A:3-VII; RSA 485-C:4, VIII
Env-Or 605.10	RSA 146-A:11-C, V-a, RSA 146-C:9-X; RSA 146-C:9-XI
Env-Or 606 (see also specific sections listed below)	RSA 146-A:11-C, V-a, RSA 146-C:9-X, RSA 147-A:3-IV RSA 485-C:4; VIII; RSA 147-F:11
Env-Or 606.10 - 606.21	RSA 147-F:12, RSA 147-F:13
Env-Or 606.15(a) and (b) intro.	RSA 146-A:11-C, V-a; RSA 146-C:9, X; RSA 147-A:3, IV; RSA 485-C:4, VIII; RSA 147-F:11; RSA 147-F:12; RSA 147-F:13
Env-Or 606.19(b)	RSA 146-A:11-C, V-a; RSA 146-C:9, X; RSA 147-A:3, IV; RSA 485-C:4, VIII; RSA 147-F:11; RSA 147-F:12; RSA 147-F:13
Env-Or 607.01 - 607.04	RSA 485-C:4, VIII; RSA 485-C:4, X; RSA 485-C:4, XI
Env-Or 607.02(b)	RSA 485-C:4, VIII; RSA 485-C:4, X; RSA 485-C:4, XI
Env-Or 607.03	RSA 485-C:4, VIII; RSA 485-C:4, X; RSA 485-C:4, XI
Env-Or 607.05	RSA 485-C:4, VIII; RSA 485-C:6-a
Env-Or 607.06 & 607.07	RSA 485-C:4, VIII; RSA 485-C:4, X; RSA 485-C:4, XI
Env-Or 607.08	RSA 485-C:4, IX
Env-Or 607.09	RSA 485-C:6-b
Env-Or 607.10 - 607.12	RSA 485-C:4, VIII
Env-Or 608	RSA 146-A:11-C, V-a; RSA 146-C:9-X; RSA 147-A:3-IV; RSA 147-F:15
Env-Or 609	RSA 146-A:11-C, V-a; RSA 146-C:9-X; RSA 147-A:3-IV; RSA 485-C:4, VIII; RSA 147-F:11; RSA 147-F:13
Env-Or 610	RSA 146-A:11-C, V-a; RSA 146-C:9-X; RSA 147-A:3-IV; RSA 485-C:4, VIII; RSA 147-F:11; RSA 147-F:13
Env-Or 611	RSA 146-A:11-C,V-a; RSA 146-C:9-X; RSA 147-A:3-IV; RSA 147-F:11
Env-Or 612	RSA 541-A:22, IV
Env-Or 613	RSA 485:3-b, I





## Appendix B: Incorporated References

Rule (Env-Or)	Reference	Obtain At:
		ASTM International 100 Barr Harbor Drive PO Box C700 West Conshohocken, PA 19428-2959 1-877-909-2786 (USA & Canada) <a href="http://www.astm.org/">http://www.astm.org/</a>
606.04(d) 611.03(d)(2) 611.03(e) 611.04(d)	Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process (ASTM E 1527-13), 2013	PDF \$69
606.13(e) 606.19(c) 606.19(d)(2)&(3)	Standard Guide for Risk Based Corrective Action (ASTM E 2081-00(2010)e1)	PDF \$80;Hardcopy \$80 + S/H
606.19(c) 606.19(d)(2)&(3)	Standard Guide for Risk Based Corrective Action at Petroleum Release Sites (ASTM E 1739-95(2010)e1)	PDF \$69
610.02(e)(3) 610.04(a)(2)	Standards Related to Environmental Sampling”, 5 <sup>th</sup> Edition, (ASTM SAMP14) 2014	Online \$199
610.02(e)(6)	Standard Guide for Sampling Waste and Soils for Volatile Organic Compounds (ASTM D4547-09) -- 2009	PDF \$49
610.04(a)(1)	Standards on Environmental Site Characterization, Fourth Edition (SITECD-10) -- 2010	Online \$289
		Environmental Protection Agency 1200 Pennsylvania Avenue, N.W. Washington, DC 20460 (202) 272-0167
610.02(e)(1)	Practical Guide for Ground-Water Sampling, document identification number EPA/600/2-85/104, September 1985	No cost to download from: <a href="http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=30000FRY.txt">http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=30000FRY.txt</a>
610.02(e)(2)	RCRA Ground-Water Monitoring: Draft Technical Guidance, document identification number PB87107751, November 1992	No cost to download from: <a href="http://www.epa.gov/epawaste/hazard/correctiveaction/resources/guidance/sitechar/gwmonitr/rcra_gw.pdf">http://www.epa.gov/epawaste/hazard/correctiveaction/resources/guidance/sitechar/gwmonitr/rcra_gw.pdf</a>
610.02(e)(4)	Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition, document identification number EPA/625/R-96/010b	No cost to download from: <a href="http://www.epa.gov/ttnamti1/files/ambient/airtox/tocomp99.pdf">http://www.epa.gov/ttnamti1/files/ambient/airtox/tocomp99.pdf</a>
610.02(e)(5)	SW 846 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, February 2007	No cost to download from: <a href="http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm">http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm</a>

**Appendix C: Statutory Definitions**

RSA 310-A:2:

V. “Engineer of record” means a professional engineer who seals drawings, reports, or documents for a project. The seal shall acknowledge that the professional engineer prepared, coordinated, or had subordinates prepare under the direct supervision of the professional engineer, drawings, reports, or documents for a project. The engineer of record shall not be responsible for engineering work performed and sealed by other professional engineers, including independent consulting engineers who work under the coordination of the engineer of record.

RSA 485-C:2:

I. “Ambient groundwater quality standards” means maximum concentration levels for regulated contaminants in groundwater which result from human operations or activities, as delineated in RSA 485-C:6.

VIII. “Groundwater” means subsurface water that occurs beneath the water table in soils and geologic formations.

XIII. “Regulated contaminant” means any physical, chemical, biological, radiological substance or other matter, other than naturally occurring substances at naturally occurring levels, in water which adversely affects human health or the environment.

RSA 146-A:2:

VI-b. “Surface water” means perennial and seasonal streams, lakes, ponds, and tidal waters within the jurisdiction of the state, including all streams, lakes, or ponds bordering on the state, marshes, watercourses, and other bodies of water, natural or artificial;