



STATE OF CONNECTICUT  
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION  
BUREAU OF WATER PROTECTION AND LAND REUSE  
REMEDIATION DIVISION  
860-424-3705

# **General Permit for In Situ Groundwater Remediation: Enhanced Aerobic Biodegradation**

Issuance Date: November 24, 2020

Expiration Date: August 26, 2030

Printed on recycled paper

# General Permit for In Situ Groundwater Remediation: Enhanced Aerobic Biodegradation

## Table of Contents

<b>Section 1.</b>	<b>Authority</b> .....	<b>1</b>
<b>Section 2.</b>	<b>Definitions</b> .....	<b>1</b>
<b>Section 3.</b>	<b>Authorization Under This General Permit</b> .....	<b>5</b>
	(a) <i>Eligible Activities</i> .....	5
	(b) <i>Requirements for Authorization</i> .....	6
	(c) <i>Geographic Area</i> .....	7
	(d) <i>Effective Date and Expiration Date of this General Permit</i> .....	7
	(e) <i>Authorization and Effective Date for Eligible Activities</i> .....	7
	(f) <i>Revocation of an Individual Permit</i> .....	9
	(g) <i>Issuance of an Individual Permit</i> .....	10
<b>Section 4.</b>	<b>Registration Requirements</b> .....	<b>10</b>
	(a) <i>Who Must File a Registration</i> .....	10
	(b) <i>Scope of Registration</i> .....	10
	(c) <i>Contents of Registration</i> .....	10
	(d) <i>Where to File a Registration and Other Related Documents</i> .....	20
	(e) <i>Additional Information</i> .....	20
	(f) <i>Action by Commissioner</i> .....	20
<b>Section 5.</b>	<b>Conditions of this General Permit</b> .....	<b>21</b>
	(a) <i>Operating Conditions</i> .....	21
	(b) <i>Monitoring Requirements</i> .....	23
	(c) <i>Reporting and Record Keeping Requirements</i> .....	27
	(d) <i>Notification and Mitigation of Certain Conditions</i> .....	29
	(e) <i>No Remediation Assurance</i> .....	32
<b>Section 6.</b>	<b>General Conditions</b> .....	<b>32</b>
	(a) <i>Erosion and Sediment Controls</i> .....	32
	(b) <i>Waste Management</i> .....	32
	(c) <i>Regulations of Connecticut State Agencies Incorporated     into this General Permit</i> .....	33
	(d) <i>Reliance on Registration</i> .....	33
	(e) <i>Duty to Correct and Report Violations</i> .....	33
	(f) <i>Duty to Provide Information</i> .....	33
	(g) <i>Certification of Documents</i> .....	34
	(h) <i>Date of Filing</i> .....	34
	(i) <i>False Statements</i> .....	34
	(j) <i>Correction of Inaccuracies</i> .....	34
	(k) <i>Transfer of Authorization</i> .....	34
	(l) <i>Other Applicable Law</i> .....	34
	(m) <i>Other Rights</i> .....	34
<b>Section 7.</b>	<b>Commissioner’s Powers</b> .....	<b>35</b>
	(a) <i>Abatement of Violations</i> .....	35
	(b) <i>General Permit Revocation, Suspension, or Modification</i> .....	35
	(c) <i>Filing of an Individual Permit Application</i> .....	35

# General Permit for In Situ Groundwater Remediation: Enhanced Aerobic Biodegradation

## Section 1. Authority

This general permit is issued under the authority of sections 22a-133z, 22a-430, 22a-430b, and 22a-454(e) of the Connecticut General Statutes.

## Section 2. Definitions

The definitions of terms used in this general permit shall be the same as the definitions contained in sections 22a-430-3(a) and 22a-133k-1(a) of the Regulations of Connecticut State Agencies. In addition, as used in this general permit:

*“Aerobic biodegradation”* means the degradation of organic pollutants, as a result of biological activity in the presence of oxygen, by the breaking of intramolecular bonds through the substitution of functional groups, mineralization, or other processes, resulting in the derivation of energy or increase in biomass;

*“Approval of registration”* means an approval of registration issued by the commissioner under this general permit;

*“Area of concern”* is a location or area where hazardous waste and/or hazardous substances (including petroleum products) have been or may have been used, stored, treated, handled, disposed, spilled, and/or released to the environment;

*“Authorized activity”* means any activity authorized by this general permit;

*“Biodegradation”* means the breakdown of organic substances by microorganisms by the breaking of molecular bonds either inter- or extra-cellularly;

*“Biodegradable”* means capable of undergoing biodegradation;

*“Biological augmentation”* means the addition to soil or groundwater of naturally occurring biologic organisms specifically cultured to preferentially degrade (by metabolism or co-metabolism) the pollutants present at the site;

*“Borehole”* means a bored, drilled, or driven shaft or hole, extending below the ground surface, that may or may not intersect the water table or yield recoverable water;

*“Certificate of coverage”* means a document issued by the department acknowledging that a particular activity for which a registration was submitted to the department is authorized pursuant to this general permit;

*“Certification for Site Conditions”* means a certification prepared by a Professional Engineer or Licensed Environmental Professional that is submitted by a registrant in support of the commissioner’s issuance of a certificate of coverage in lieu of an approval of registration otherwise required when certain site conditions exist;

*“Coastal boundary”* means the boundary described in section 22a-94(b) of the Connecticut General Statutes;

*“Coastal water”* means coastal waters as defined by section 22a-93 of the Connecticut General Statutes;

*“Commissioner”* means commissioner as defined by section 22a-2(b) of the Connecticut General Statutes;

*“Conceptual site model”* or *“CSM”* means a representation of an environmental system, incorporating information about a chemical’s release, fate, transport mechanisms and pathways, and any potential receptors, that is used as a tool for understanding and for explaining to others the basis and rationale for the site investigation and the conclusions drawn about the environmental conditions at a site;

*“Constituent of concern”* or *“COC”* means a component, breakdown product, or derivative of a substance that may be found in the environment as a result of a release or discharge, or a reaction caused by such a release or discharge;

*“Controlled rate”* means to supply oxygen at concentrations and volumes that will result in molecular oxygen concentration in groundwater outside the emplacement area below saturation and without the generation of free radicals;

*“Day”* means the calendar day;

*“Department”* or *“DEEP”* means the Connecticut Department of Energy & Environmental Protection;

*“Discharge”* means discharge as defined in section 22a-423 of the Connecticut General Statutes and also includes, for the purposes of this general permit, the injection or emplacement of substances on or below the ground surface, above or below the water table, that are intended to react with or dissolve into the waters of the state to affect their chemical properties or react with pollutants in the water or soil;

*“Discharge monitoring well”* means a monitoring well used for evaluation of the quality of groundwater that may be affected by activities authorized by this general permit;

*“Emplacement”* means the physical introduction on or below the ground surface of a substance, by any means, either permanently or temporarily;

*“Endangered or threatened species”* means endangered or threatened species as defined by section 26-304 of the Connecticut General Statutes;

*“Fluid”* means fluid as defined in section 22a-430-8(a) of the Regulations of Connecticut State Agencies;

*“Free product”* means free product as defined in section 22a-449(d)-101 of the Regulations of Connecticut State Agencies;

*“Groundwater”* means groundwater as defined in section 22a-133k-1 of the Regulations of Connecticut State Agencies;

*“Heating oil”* means petroleum fuel that is typically used in the operation of heating equipment, boilers, or furnaces, including but not limited to fuel oil of various grades;

*“Individual permit”* means a permit issued to a named permittee under sections 22a-430 or 22a-454 of the Connecticut General Statutes;

*“Infiltration structure”* means a structure, excavation or other facility designed to allow liquids to percolate into the underlying soil without overflow and to mix with the groundwater;

*“Injection”* means injection as defined in section 22a-430-8(a) of the Regulations of Connecticut State Agencies;

*“Inland wetlands”* means wetlands as defined by section 22a-38 of the Connecticut General Statutes;

*“Leaching system”* means a structure, excavation or other facility designed to allow sewage or other liquids to percolate into the underlying soil without overflow and to mix with the groundwater;

*“Licensed Environmental Professional”* or *“LEP”* means an environmental professional licensed pursuant to the requirements of section 22a-133v of the Connecticut General Statutes;

*“Metal peroxide”* means either calcium or magnesium peroxide (CaO<sub>2</sub> or MgO<sub>2</sub>) which may have associated oxides or hydroxides;

*“Monitoring well”* means a well designed and used to obtain representative samples of groundwater for evaluation of groundwater quality;

*“Municipality”* means a city, town, or borough of the state;

*“Oxygen releasing substance”* means any substance that, when combined with water, supplies oxygen *at a controlled rate* in a concentration suitable to support aerobic biologic activity, including, but not limited to, metal peroxides and oxyhydroxides that may have intercalated phosphates;

*“Permittee”* means any person who or municipality which has filed a registration and, if required by this general permit, to whom or to which the commissioner has provided a certificate of coverage or has issued an approval of registration;

*“Person”* means person as defined by section 22a-2(c) of the Connecticut General Statutes;

*“Professional Engineer”* or *“P.E.”* means a professional engineer licensed by the Connecticut Department of Consumer Protection;

*“Petroleum”* means petroleum as defined in section 22a-449a of the Connecticut General Statutes;

*“Petroleum fuel”* means a petroleum product produced for use as fuel for heating or transportation, including but not limited to gasoline, jet fuel, diesel fuel, and heating oil, excluding petroleum products produced for use as lubricants or solvents, and excluding fuels blended with solvents or wastes or over twenty percent (20%) non-petroleum in origin;

*“Pollution”* means pollution as defined in section 22a-423 of the Connecticut General Statutes;

*“Public water supply well”* means a water supply well that is a source of drinking water supply for a public water system, as defined in section 19-13-B102 of the Regulations of Connecticut State Agencies;

*“Registrant”* means a person who or municipality which files a registration pursuant to Section 4 of this general permit;

*“Registration”* means a registration form filed with the commissioner pursuant to Section 4 of this general permit, including any fees, supplemental documents, and certifications as specified in Section 4 of this general permit;

*“Removable device”* means any physical containment system, such as filter socks or cylindrical screens, that allows solid or powdered metal peroxide or other oxygen releasing substances to be placed within a well and react with the water in the well, and that can later be removed;

*“Residential property”* means real property with a house, apartment, trailer, mobile home, condominium or other structure, composed of up to four residential units, solely occupied by individuals as a dwelling;

*“Residential heating oil tank”* means a tank, and its associated fill and distribution lines, that is or was used to store heating oil at a residential property;

*“Site”* means geographically contiguous land or water on which an authorized activity takes place or on which an activity for which authorization is sought under this general permit is

proposed to take place, and includes, for the purposes of this general permit, consideration as a single site of contiguous parcels and associated roads and rights of way, even if owned by different persons, which are located over a single free product or groundwater pollution plume;

*“Source of drinking water supply”* means active source of supply, as defined in section 19-13-B102 of the Regulations of Connecticut State Agencies;

*“Source water area”* means an area of land, delineated by the state, that contributes water to a source of drinking water supply, whether the source is groundwater, surface water, or both;

*“Supervised remediation site”* means a site at which remediation is being conducted:

- i) in accordance with sections 22a-133x, 22a-133y, or 22a-134a of the Connecticut General Statutes,
- ii) under sections 22a-449(c)-105(h) or 22a 449(d)-106 of the Regulations of Connecticut State Agencies, or
- iii) to achieve compliance with an order of the commissioner issued pursuant to section 22a-432 of the Connecticut General Statutes;

*“Supplemental nutrients”* means substances added to the site to correct a deficiency in the supply of any nutrient, such as phosphorous or nitrogen, that is necessary to support microbial growth;

*“Surface water classification”* means the water quality classification for a surface water body, as established in accordance with the water quality standards adopted pursuant to section 22a-426 of the Connecticut General Statutes;

*“Tank”* means tank as defined in section 22a-449(d)-101 of the Regulations of Connecticut State Agencies, and also including, but not limited to, any associated fill and distribution lines;

*“Tidal wetland”* means wetland as defined in section 22a-29 of the Connecticut General Statutes;

*“Total petroleum hydrocarbons”* or *“TPH”* means the reported results of an analysis conducted using the Connecticut Extractable Total Petroleum Hydrocarbons test, or other methodology approved by the commissioner to determine the concentration of gross oil or hydrocarbon in a substance or material;

*“Underground source of drinking water”* means underground source of drinking water as defined in section 22a-430-8 of the Regulations of Connecticut State Agencies;

*“Unprotected subsurface structure”* means a metal structure, such as a tank, pipe or conduit, that is below the ground surface, in contact with the soil, and not protected from corrosion by either an applied dielectric coating or a cathodic protection system, or any other structure that may come into contact with groundwater containing substances that could affect the structure’s integrity;

*“Watercourse”* means watercourse as defined in section 22a-38 of the Connecticut General Statutes;

*“Water supply well”* means water supply well as defined in section 19-13-B51b of the Regulations of Connecticut State Agencies; and

*“Well”* means well as defined in section 22a-430-8(a) of the Regulations of Connecticut State Agencies.

### Section 3. Authorization Under This General Permit

(a) *Eligible Activities*

Provided the requirements of Section 3 of this general permit are satisfied, this general permit authorizes, except as limited by Section 5 of this general permit, the introduction at a single site of oxygen and necessary supplemental substances into soil or groundwater to enhance aerobic biodegradation of pollution, as follows:

- (1) Emplacement of oxygen releasing substances, in solid, powdered, or any fluid form, in an open excavation resulting from removal of a tank or polluted soil, to remediate soil or groundwater polluted by *petroleum fuel*;
- (2) Emplacement of removable devices, containing oxygen releasing substances, below the water table in open boreholes or wells, to provide oxygen to remediate soil or groundwater polluted by *petroleum fuel*, sources of such pollution, or to limit the migration of such pollution;
- (3) Injection or emplacement of oxygen releasing substances, in solid, powdered, or any fluid form, on or below the ground surface at one or more points, infiltration structures, wells, or boreholes that are in an area of *petroleum fuel* pollution, or up-gradient or down-gradient from such area, to remediate soil or groundwater polluted by *petroleum fuel*, sources of such pollution, or to limit the migration of such pollution;
- (4) Discharge, injection, or emplacement of supplemental nutrient substances and/or pH adjusting chemicals, with or without the addition of an oxygen source, as determined necessary to enhance the aerobic growth environment;
- (5) Discharge, injection or emplacement of naturally occurring biologic organisms that have been cultured to preferentially degrade (by metabolism or co-metabolism) the target pollutants, as determined necessary to augment the naturally present organisms;
- (6) Discharge of oxygen or ozone in gaseous form, or of oxygen, ozone or dilute hydrogen peroxide contained in water, below the ground surface at one or more points, infiltration devices or structures, wells, or boreholes that are in an area of *petroleum fuel* pollution, or up- or down-gradient from such area, to remediate soil or groundwater polluted by *petroleum fuel*, sources of such pollution, or to limit the migration of such pollution;
- (7) Discharge of oxygen or ozone in gaseous form, or of oxygen, ozone or dilute hydrogen peroxide contained in water, or of oxygen releasing substances, in solid, powdered, or any fluid form, in open excavations or on or below the ground surface by any means at one or more points, infiltration structures, wells, or boreholes that are in an area of pollution, or up- or down-gradient from such area, to remediate soil or groundwater polluted by *biodegradable pollutants other than petroleum fuel*, or sources of such pollution, or to limit the migration of such pollution;
- (8) Ancillary short term discharge into groundwater of substances demonstrated necessary to maintain a condition facilitating continued use as intended of any well, borehole, or infiltration structure used for introduction of substances pursuant to Sections 3(a)(1) through 3(a)(7) of this general permit, at any time during the implementation of such other activities; and
- (9) Generation, and subsequent presence in water within the zone of influence, of metabolic byproducts associated with the authorized activities.

Any discharge of water, substance or material into the waters of the state other than those specified in this section is not authorized by this general permit, and any person who or municipality which initiates, creates, originates or maintains such discharge must first apply for and obtain authorization under section 22a-430 or 22a-430b of the Connecticut General Statutes.

**(b) Requirements for Authorization**

This general permit authorizes the activities listed in Section 3(a) of this general permit provided the requirements of this subsection of this general permit are met.

**(1) Registration**

A completed registration with respect to such discharge (see Section 4 of this general permit), including all applicable fees, shall have been filed with the commissioner.

**(2) Coastal Area Management**

Such activities shall be consistent with all applicable goals and policies in section 22a-92 of the Connecticut General Statutes, and shall not cause adverse impacts to coastal resources as defined in section 22a-93 of the Connecticut General Statutes.

**(3) Endangered and Threatened Species**

Such activities shall not threaten the continued existence of any species listed pursuant to section 26-306 of the Connecticut General Statutes as endangered, threatened, or species of special concern and shall not result in the destruction or adverse modification of habitat essential to such species.

**(4) Aquifer Protection**

Such activities, if located within an aquifer protection area as mapped under section 22a-354b of the Connecticut General Statutes, shall comply with regulations adopted pursuant to section 22a-354i of the Connecticut General Statutes.

**(5) Conservation and Preservation Restrictions**

If activities are on or may affect property subject to a conservation or preservation restriction, proof of written notice to the holder of such restriction of the proposed activity's registration pursuant to this general permit or a letter from the holder of such restriction verifying that the proposed activity is in compliance with the terms of the restriction shall have been provided to the commissioner.

**(6) Wetlands and Watercourses**

Such activities shall cause only minimal adverse impacts on the environment, including, without limitation, watercourses, coastal waters, inland wetlands, tidal wetlands, and fish and wildlife habitat.

**(7) Flood Hazards**

Such activities shall not cause or contribute to flooding or flood hazard, permanently obstruct a floodway, or interfere with federal, state, or local flood management efforts; and such activities comply with the National Flood Insurance Program requirements.



(8) **Sources of Drinking Water**

Such activities shall not affect an underground source of drinking water or a watercourse, or any tributary thereto, which is or contributes to a source of drinking water supply; unless the discharge is necessary and appropriate to remediate groundwater pollution and, to the maximum extent practical, the discharge does not impair public health or the environment.

(9) **Water Diversions**

Any activity involving a groundwater withdrawal of greater than 50,000 gallons per day shall have in effect a valid license issued by the Commissioner pursuant to sections 22a-6 and 22a-368 or 22a-378a of the Connecticut General Statutes, or be exempt pursuant to section 22a-377(b)-1(a) of the Regulations of Connecticut State Agencies.

(10) **Local Authorizations**

Any local authorizations required for such activities shall have been obtained.

(c) ***Geographic Area***

This general permit applies throughout the State of Connecticut.

(d) ***Effective Date and Expiration Date of this General Permit***

This general permit is effective on the date it is issued by the commissioner and expires ten years from such date of issuance.

(e) ***Authorization and Effective Date for Eligible Activities***

(1) **Authorization by Approval of Registration**

(A) A commissioner's approval of registration is always required (except that additional phases of activity may be authorized under Section 3(e)(4) of this general permit), and the effective date is the day of issuance of such approval of registration, to authorize eligible activities that occur or will cause a zone of influence:

- (i) within an area with a groundwater quality classification of GAA;
- (ii) within an identified aquifer protection area;
- (iii) within a public water supply well source water area;
- (iv) on land owned by an owner or operator of a public water supply that is defined as class I or class II water company land pursuant to section 25-37c of the Connecticut General Statutes; or
- (v) on or below the surface of the bedrock, or within two feet above such surface.

(B) Any other eligible activity pursuant to Sections 3(a)(1) through 3(a)(7) of this general permit requires a commissioner's approval of registration, except as authorized pursuant to Sections 3(e)(2) through 3(e)(4) of this general permit.

(2) **Authorization by Certificate of Coverage**

Except for an activity in an area referenced in Sections 3(e)(1)(A)(i) through 3(e)(1)(A)(v) of this general permit, the following eligible activities are authorized

by the commissioner's issuance of a certificate of coverage, and the effective date is the day of issuance of such certificate of coverage:

(A) Activities referenced in Sections 3(a)(1) through 3(a)(6) of this general permit at a *supervised remediation site*; however, if the activity or location is referenced in (i)-(iv) immediately below, then a Certification for Site Conditions (pursuant to Section 4(c)(4)(C) of this general permit) must be included with the registration for the commissioner to issue a certificate of coverage (in lieu of an approval pursuant to Section 3(e)(1)(B) of this general permit):

- (i) any activity referenced in Sections 3(a)(4) through 3(a)(6) of this general permit.
- (ii) activities within an area with a groundwater quality classification of GA;
- (iii) any activity occurring or creating an expected zone of influence within 1,000 feet of a public water supply well, within 200 feet of any water supply well pumping over ten (10) gallons per minute, or within seventy-five (75) feet of any other water supply well; and
- (iv) any activity in locations where any of the following sensitive site conditions are present:
  - 1) the water table is less than fifteen (15) feet above the surface of the bedrock,
  - 2) groundwater contains greater than 10 mg/l dissolved iron,
  - 3) groundwater contains greater than 10,000 mg/l TPH,
  - 4) an existing leaching system is within twenty-five (25) feet of the expected zone of influence,
  - 5) a coastal water, tidal or inland wetland, or watercourse is within twenty-five (25) feet, of the expected zone of influence, or
  - 6) an underground utility, unprotected subsurface structure, or basement is within twenty-five (25) feet of the expected zone of influence; and

(B) Activities referenced in Sections 3(a)(2), 3(a)(3), and 3(a)(6) of this general permit at a site polluted solely by a release of *heating oil* from a tank with a capacity of less than 2,100 gallons, *provided that*:

- (i) the proposed discharge does not total more than 150 pounds of oxygen supplied within a twelve (12) month period, and
- (ii) a Certification for Site Conditions (pursuant to Section 4(c)(4)(C) of this general permit) is included with the registration for any activity pursuant to Section 3(a)(6) of this general permit or in a location identified in Sections 3(e)(2)(A)(ii) through 3(e)(2)(A)(iv) of this general permit.

**(3) Authorization by Receipt of Registration**

Except for an activity in an area referenced in Sections 3(e)(1)(A)(i) through 3(e)(1)(A)(v) of this general permit the following eligible activity is authorized upon

the commissioner's receipt of a complete and accurate registration with respect to such activity, and the effective date is the day such registration is received:

Emplacement of oxygen releasing substances into an *open excavation* associated with removal of, or remediating a release from, a tank with a capacity less than 2,100 gallons used to store heating oil, *provided that*:

- (i) the proposed discharge does not total more than 150 pounds of oxygen supplied, and
- (ii) a Certification for Site Conditions (pursuant to Section 4(c)(4)(C) of this general permit) is included with the registration for any activity in a location within seventy-five (75) feet of any water supply well not on the parcel where the activity is proposed, or within 25 feet of an existing leaching system, coastal water, tidal or inland wetland, watercourse, underground utility, or unprotected subsurface structure.

**(4) Authorization of Additional Phases of Activity**

- (A) Except as may be authorized pursuant to Section 3(e)(4)(B) of this general permit, any additional phase(s) of implementation for activity that has been authorized pursuant to this general permit, including scale-up of project scope from an authorized pilot study, is(are) authorized upon the date the commissioner approves the work plan for such additional phase(s) of activity submitted pursuant to Section 5(c)(3) of this general permit.
  - (B) Additional phased implementation of authorized activity to remediate petroleum fuel pollution pursuant to Sections 3(a)(1) through 3(a)(6) of this general permit, excluding change in type of activity and scale-up of project scope from an authorized pilot study, is authorized thirty (30) days after the commissioner's receipt of a complete work plan for such additional phased activity pursuant to Section 5(c)(3) of this general permit *provided that*:
    - (i) an earlier approval by the commissioner states no additional work plan approval is necessary, or
    - (ii) the activity is not in a location identified in either Section 3(e)(1)(A) or Section 3(e)(2)(A)(iii) of this general permit.
- (5) Any activity pursuant to Section 3(a)(8) of this general permit to maintain a condition facilitating continued activity already authorized pursuant to this general permit is authorized upon the date the commissioner approves the work plan for such activity submitted pursuant to Section 5(c)(3) of this general permit.
- (6) Any authorization of activity effective pursuant to Section 3(e) of this general permit also authorizes generation, and subsequent presence in water within the area of authorized activity, of metabolic byproducts associated with the authorized activity.

**(f) Revocation of an Individual Permit**

If an activity meets the requirements of authorization of this general permit and such activity is presently authorized by an individual permit, the existing individual permit may be revoked by the commissioner upon a written request by the permittee. If the commissioner revokes such individual permit in writing, such revocation shall take effect on the effective date of authorization of such activity by this general permit.

**(g) Issuance of an Individual Permit**

If the commissioner issues an individual permit authorizing an activity authorized pursuant to this general permit, this general permit shall cease to authorize that activity beginning on the date such individual permit is issued.

**Section 4. Registration Requirements**

**(a) Who Must File a Registration**

Any person seeking, under the authority of this general permit, to introduce oxygen and necessary supplemental substances into soil, groundwater, or an open excavation to enhance aerobic biodegradation of pollution shall file with the commissioner:

- (1) The applicable fee as specified in Section 4(c)(1) of this general permit,
- (2) A complete and accurate registration form meeting the requirements of Section 4(c)(2) of this general permit,
- (3) Supporting documents as specified in Section 4(c)(3) of this general permit, and
- (4) Certifications to meet the requirements of Section 4(c)(4) of this general permit.

**(b) Scope of Registration**

A registrant shall submit one registration form for all activities taking place at a single site, as defined in this general permit, for which the registrant seeks authorization under this general permit. Activities taking place on more than a single parcel may not be consolidated on one registration form unless they are associated with remediation of a single pollution release.

**(c) Contents of Registration**

**(1) Fees**

- (A) Except as provided in Sections 4(c)(1)(B) through 4(c)(1)(F) of this general permit, the registration fee of \$4,000.00 shall be submitted with a registration form.
- (B) For any activity pursuant to Sections 3(a)(1) through 3(a)(6) of this general permit that is conducted at a supervised remediation site, or pursuant to Sections 3(a)(2) through 3(a)(6) of this general permit and associated with a release solely of heating oil from a tank with a capacity of less than 2,100 gallons, the registration fee of \$2,000.00 shall be submitted with a registration form.
- (C) For activity consisting solely of oxygen releasing substance emplacement into an open excavation resulting from removal of, or remediating a release from, a tank with a capacity less than 2,100 gallons used to store heating oil at any site, including a supervised remediation site, the registration fee of \$1,000.00 shall be submitted with a registration form.
- (D) Fees required pursuant to Sections 4(c)(1)(A) through 4(c)(1)(C) of this general permit are reduced to half (1/2) the fee specified if no approval by the commissioner is required pursuant to Section 3(e) of this general permit, or if a Certification for Site Conditions is submitted with a registration form pursuant to Sections 3(e) and 4(c)(4)(C) of this general permit.

- (E) Fees required pursuant to Sections 4(c)(1)(A) through 4(c)(1)(C) of this general permit, including reduced fees pursuant to Section 4(c)(1)(D), are reduced to half (1/2) the fee required if the registrant or the property owner of the primary parcel is a municipality.
- (F) Fees required pursuant to Sections 4(c)(1)(A) through 4(c)(1)(C) of this general permit may be waived for any activity addressing pollution originating from a single family residence.
- (G) A registration shall not be deemed complete and the subject discharge or activity shall not be authorized by this general permit unless the registration fee has been paid in full.
- (H) The registration fee shall be paid by check or money order payable to the **Department of Energy & Environmental Protection**.
- (I) The registration fee is non-refundable.

(2) **Registration Form**

A registration shall be filed on forms prescribed and provided by the commissioner and shall include, but not be limited to, the following:

*Registrant and Contact Information*

- (A) Legal name, address, and telephone number of the registrant and, if the registrant is not the owner of property on which the subject activity is to take place, the registrant's relationship to such owner(s);
- (B) Legal name, address, and telephone number of the owner(s) of the property(ies) on which the subject activity is to take place;
- (C) Legal name, address, and telephone number of the registrant's attorney or other representative, if applicable;
- (D) Legal name, address, and telephone number of any consultant(s) or engineer(s) retained by the registrant to prepare the registration or to design, construct, or supervise the subject activity;

*Site Information*

- (E) Name, location, street address, and town of the site, and, if the site includes multiple parcels, a list of all parcels where activity is proposed or where groundwater quality may be affected (as delineated by the zone of influence), providing such parcels are associated with remediation of a single pollution release;
- (F) A statement whether the primary parcel of the site is or is not a residential property as defined in this general permit and, if so, whether it is a single family residential property;

*Site Setting*

- (G) A statement whether the area where the subject activity, zone of influence, or access and support activity will occur is or is not, in whole or in part, within the coastal boundary, upon Indian lands, subject to a conservation or preservation restriction, in essential habitat of an endangered or threatened species, or in an area identified on the department's map depicting Natural Diversity Data Base locales;

- (H) A statement whether the area where the subject activity, zone of influence, or access and support activity will occur is or is not within 100 feet of any watercourse, coastal water, inland wetland, or tidal wetland; within any identified floodplain; or within stream channel encroachment lines established pursuant to section 22a-342 of the Connecticut General Statutes;
- (I) The name and surface water classification, pursuant to section 22a-426 of the Connecticut General Statutes, of the nearest surface water downgradient from the area where the subject activity will occur and its distance from the zone of influence;
- (J) A statement whether the area of proposed activity or zone of influence is or is not within one mile of any public water supply well;

*Site Character*

- (K) A statement whether the primary parcel of the site is or is not undergoing remediation being conducted in accordance with:
  - (i) sections 22a-133x, 22a-133y, or 22a-134a of the Connecticut General Statutes,
  - (ii) sections 22a-449(c)-105(h) or 22a-449(d)-106 of the Regulations of Connecticut State Agencies, or
  - (iii) an order of the commissioner issued pursuant to section 22a-432 of the Connecticut General Statutes;
- (L) A statement, including any DEEP ID numbers, as to whether the area where the subject activity, zone of influence, or access and support activity will occur is or is not on a parcel(s):
  - (i) listed on the State Inventory of Hazardous Waste Disposal Sites,
  - (ii) included in EPA's Comprehensive Environmental Response Compensation and Liability Information System database (CERCLIS) "Superfund",
  - (iii) regulated under Subtitles C or I of the Federal Resource Conservation and Recovery Act (RCRA), as amended, or under section 22a-449 of the Connecticut General Statutes,
  - (iv) regulated under Subtitle D of the Federal Resource Conservation and Recovery Act (RCRA), as amended, or under section 22a-208 of the Connecticut General Statutes, or
  - (v) subject to a discharge permit issued under section 22a-430 of the Connecticut General Statutes;

*Site Conditions*

- (M) Identification of whether the subject activity or zone of influence will or will not occur at a location where the following sensitive site conditions exist:
  - (i) the water table is less than 15 feet above the bedrock surface,
  - (ii) groundwater contains greater than 10 mg/l dissolved iron,
  - (iii) groundwater contains greater than 10,000 mg/l TPH,
  - (iv) a leaching system is located within 25 feet,

- (v) a coastal water, tidal or inland wetland, or watercourse is located within 25 feet, or
- (vi) an underground utility, unprotected subsurface structure, or basement is located within 25 feet;
- (N) A description of the evidence that pollution is present on the site, and a statement that mobile free product is not present or has been removed to the maximum extent technically practicable from the area of proposed activity, taking into consideration soil and site characteristics;
- (O) A statement whether the subject activity or zone of influence will or will not occur at a location within an identified aquifer protection area, or within a public drinking water source water area, or will occur on land owned by an operator of a public water supply system;
- (P) The groundwater classification(s), pursuant to section 22a-426 of the Connecticut General Statutes, of the area where the subject activity or zone of influence will occur;
- (Q) A statement whether the subject activity or zone of influence will or will occur place within 1,000 feet of a public water supply well, within 200 feet of any water supply well pumping over ten (10) gallons per minute, or within 75 feet of any other water supply well, and a list of all public water supply wells located within 1,000 feet and all other water supply wells located within 500 feet of the subject activity zone of influence;

*Other Information*

- (R) A description of the potential adverse environmental effects of the subject activity relative to the requirements listed in Section 3(b)(2) through Section 3(b)(7) of this general permit, and the practices or methods to be implemented by the registrant to minimize such effects;
- (S) Full-sized original United States Geological Survey (USGS) quadrangle map(s) or an 8 inch by 11 inch copy of the relevant portion(s) of such maps, with the quadrangle name(s) and numbers(s) identified and with a scale of 1:24,000, showing the exact location of the site, the area within a one mile radius of the site, mapped location of any boundaries or features associated with information listed in Sections 4(c)(2)(G) through 4(c)(2)(I) and 4(c)(2)(P) of this general permit and within one mile of the site, and all public water supply wells within one mile of the site; and
- (T) If the subject activity is an existing activity, the date it began and the date it is expected to end, and any departmental permit or authorization number; if the subject activity is a new activity, the date the registrant intends to initiate the activity and the date it is expected to end.

**(3) Required Supporting Documents**

**(A) *Site Conditions Report***

A site conditions report shall describe the environmental conditions resulting in the necessity of the proposed discharge to remediate soil or groundwater pollution, and those conditions potentially affecting or affected by such discharge.

- (i) If the site is residential property with only a heating oil release originating on the site, the site conditions report shall include, at a minimum:
  - 1) a description of the origin and character of the petroleum release, and all details (construction, size, depth, age, etc.) of any associated tanks;
  - 2) an identification (“site review”) of any historical releases of pollution, non-residential uses, or importation of fill at the site;
  - 3) a description of any remediation conducted to date to prevent further releases or remove free product, polluted soil, or polluted groundwater; and
  - 4) a summary of available information regarding hydrogeology, groundwater flow, and groundwater quality, including, if known, depths to water table and bedrock, and, if known for groundwater within the release area, dissolved iron and dissolved manganese concentrations.
- (ii) If the site is not solely residential property or is a residential property with any release other than heating oil, the site conditions report shall include a description of the conceptual site model and conditions relative to the activity proposed, including at a minimum:
  - 1) the origin and character of the petroleum or other pollutant release and all details of any associated tanks;
  - 2) a review of current and past activities at and uses of the site, identification of any potential pollutants other than petroleum that may be present as a result of releases due to such activity or use or due to importation of polluted fill, and identification and description of specific areas of concern that may be affected by the proposed activity;
  - 3) a description of any remediation conducted to date to prevent further releases or remove free product, polluted soil, or polluted groundwater;
  - 4) a description of the hydrogeology, groundwater flow and groundwater quality at the site, including depths to water table and bedrock, and, except for sites where the proposed activity is only emplacement of oxygen releasing substances in an open excavation resulting from removal of a tank or polluted soil, for groundwater within the release area, dissolved iron and dissolved manganese concentrations, total petroleum hydrocarbon concentration, chemical oxygen demand, pH, dissolved oxygen, and oxidation-reduction potential; and
  - 5) a delineation of the extent of polluted soil, free product, and groundwater pollution present, except where the proposed activity is only emplacement of oxygen releasing substances in an open excavation resulting from removal of a tank or polluted soil.
- (iii) For all sites, if a site is identified as subject to any of the authorities in Section 4(c)(2)(L) of this general permit, excluding those subject only to section 22a-449(d)-106 of the Regulations of Connecticut State



Agencies, or if the site review or site conditions report determines there are potential pollutants other than petroleum, the site conditions report shall include:

A listing of constituents of concern, based on either pre-existing characterization or monitoring data or a minimum of two screening analyses each of the soil and groundwater within the area of proposed activity and zone of influence, to determine if any constituents listed in Appendix B to section 22a-430-4 of the Regulations of Connecticut State Agencies are present above concentrations occurring naturally in the environment.

(B) *Site Plan*

A site plan shall, for the entire area of proposed activity and zone of influence, depict, at a minimum:

- 1) the site and parcel boundaries;
- 2) the location of the subject activity;
- 3) the location, on the site or off-site but within 100 feet of the proposed activity or zone of influence, of structures, paved areas, water supply wells, leaching systems, known wetlands boundaries, floodplains, watercourses, and existing tanks (including pipelines, and fill and dispenser locations), drains, utilities and other structures, along with notes of any installed corrosion protection on any underground structures;
- 4) the former location of any removed tanks (including pipelines, and fill and dispenser locations) and petroleum polluted soils, and the extent and depth of remaining petroleum polluted soil;
- 5) the location of any other area of concern identified pursuant to the requirement of Section 4(c)(3)(A) of this general permit;
- 6) the locations of all existing and proposed wells, and identification of any proposed discharge monitoring wells;
- 7) the inferred direction of groundwater flow and extent of any identified free product and groundwater pollution; and
- 8) the locations and expected zone of influence of each specific point where substances will be emplaced on or below the ground surface, and the resultant composite zone of influence.

(C) *Work Plan*

A work plan shall describe all activities planned for the introduction of substances on or below the ground surface at the location for which a registration is submitted, including, at a minimum:

- 1) information regarding the exact substance(s) to be introduced, including identification of all chemical constituents, any additives, and any amendments or supplements, including cultured biologic organisms, proposed to be used;
- 2) evaluation of the interaction between the proposed substance(s) to be emplaced and the location's aquifer matrix and groundwater, and also any pollutants identified as present, including those identified based on

the results of any evaluation conducted in fulfillment of Section 4(c)(3)(A)(iii) of this general permit, and discussion of how any adverse interaction will be mitigated and monitored;

- 3) results of any treatability studies, bench scale studies, or pilot studies conducted to gather information to design the proposed action;
- 4) for activity pursuant to Section 3(a)(4) of this general permit, detailed evaluation of the necessity for any proposed supplements or amendments, based on monitoring nutrient levels and pH in groundwater prior to any activity, determination of the specific supplements or amendments needed, and calculations of the amounts and concentrations required;
- 5) details of the concentration and amount of substance(s) to be used, including the total pounds of oxygen that will be supplied, the data and calculations used to determine the amount, its proposed distribution relative to the pollution to be remediated, and a description of the detailed emplacement locations and depths, their expected zones of influence, and specific emplacement mechanisms, including proposed injection pressures and flow rates, and a discussion of how these activities will be monitored at the discharge point(s);
- 6) for activity pursuant to Section 3(a)(5) of this general permit, microcosm studies of biologic populations and levels and the evaluation and details of the proposed biologic augmentation;
- 7) details of the procedures for material storage and handling, including procedures for reagent handling, mixing, measurement, applicable controls and alarms, and methods for disposal of excess or off-specification material; and
- 8) contingency procedures, including spill management procedures, actions to take in response to observations during active emplacement, and actions to take in response to monitoring results.

(D) *Monitoring Plan*

A monitoring plan shall describe a monitoring program to: meet the requirements of Section 5(b) of this general permit, monitor the performance of any discharge delivery system, and document the effect, if any, of the proposed activity on the waters of the state.

Such plan shall include, at a minimum:

- 1) identification of water supply wells within 75 feet of the proposed activity, or otherwise required or proposed to be monitored pursuant to this general permit, and specifics of the well and water system construction;
- 2) identification of proposed discharge monitoring wells outside the expected zone of influence, and their hydrogeologic relationship to such zone, as well as any proposed activity monitoring at discharge points or monitoring wells within the expected zone of influence, and, for all proposed monitoring wells, the specifics of their construction and the rationale for their inclusion in the monitoring program;

- 3) a description of how any discharge that is active for more than 24 hours or is pressurized will be evaluated for its effects on the hydrogeologic flow regime and its conformance with the zone of influence identified in the registration;
- 4) a list of project-specific constituents of concern, including parameters specific to the substance proposed for discharge, the pollutant present, and those based on the results of any evaluations conducted in fulfillment of Sections 4(c)(3)(A)(iii) and 4(c)(3)(C) of this general permit, and a proposed project-specific monitoring parameter list, including the rationale for inclusion or exclusion from the monitoring program of each constituent of concern;
- 5) a description of the sampling and analysis procedures to be used; and
- 6) a description of the data evaluation procedures to be used in drawing conclusions from the monitoring data consistent with the objectives and requirements of this general permit.

*Exception:* For sites with only a heating oil release that originated on the site from a tank with a capacity less than 2,100 gallons a specific monitoring plan is not required as part of the registration, if the proposed discharge totals less than 150 pounds of oxygen supplied and the activity is pursuant to Sections 3(a)(1) through 3(a)(3) or 3(a)(6) of this general permit. However, the commissioner may require a monitoring plan as a condition in an approval of registration, and any required supply well monitoring must be in compliance with the requirements of Section 5(b) of this general permit.

(4) **Certifications**

- (A) The registration shall include the signature of the registrant(s) and of the individual or individuals responsible for actually preparing the registration, each of whom shall certify in writing as follows:
  - (i) “I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I certify that this general permit registration is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.”
  - and (ii) “I certify that I have read the *General Permit for In Situ Groundwater Remediation: Enhanced Aerobic Biodegradation* issued by the Connecticut Commissioner of Energy & Environmental Protection; that the activities which are the subject of this registration are eligible for authorization under such permit; that if such activities commenced prior to the issuance of such permit, all applicable requirements of such permit are being met; and that a functioning and effective system is in place to assure that all such requirements are met so long as the activities which are the subject of this registration continue.”

- (B) The registration shall include the following certification, signed by a Professional Engineer, licensed to practice in Connecticut, or a Connecticut Licensed Environmental Professional:
- (i) “I certify that I have thoroughly and completely reviewed the: site conditions report, including the past and present uses of the site and fill history; site plan; work plan; and, if applicable, monitoring plan; and, if applicable, results of screening samples included with this registration and any other site characterization samples. I certify, based on such review and on my professional judgment, that any constituent of concern list includes all non-petroleum potential pollutants present in the area of proposed activity or zone of influence. I further certify, based on my professional judgment, that the proposed activities are necessary and the activity design, development specifications and implementation procedures are appropriate for remediation of the pollutants present at the area of the site where activity is proposed, and that the proposed activities are based on an appropriate site characterization consistent with prevailing standards and guidelines.”
  - and (ii) “I am aware that any professional services rendered pursuant to this general permit shall conform to the applicable rules of professional conduct of the Regulations of Connecticut State Agencies (for P.E.s section 20-300-12(a) and for LEPs section 22a-133v-6). I am also aware that there are significant penalties for false statements in this certification, including the possibility of fine and imprisonment for knowingly making false statements”.
- (C) A Certification for Site Conditions, set forth below, signed by a P.E. or LEP, is required in two instances: when the registrant requests a certificate of coverage (pursuant to Section 3(e)(2) of this general permit) in lieu of a required approval, or when the registrant proposes to conduct activities which are authorized upon registration if such Certification for Site Conditions is required (pursuant to Section 3(e)(3) of this general permit). Submittal of a Certification for Site Conditions shall serve to meet the certification requirement in Section 4(c)(4)(B) of this general permit.

*Certification for Site Conditions:*

- (i) “I certify that I have thoroughly and completely reviewed the: site conditions report, including the past and present uses of the site and fill history; site plan; work plan; and, if applicable, monitoring plan; and, if applicable, results of screening samples included with this registration and any other site characterization samples. I certify, based on such review and on my professional judgment, that any constituent of concern list includes all non-petroleum potential pollutants present in the area of proposed activity or zone of influence and that the proposed activities are based on an appropriate site characterization consistent with prevailing standards and guidelines. I also certify that I have thoroughly and completely reviewed the proposed activities that, pursuant to Sections 3(e)(1) through 3(e)(3) of this general permit, require approval by the commissioner unless a Certification for Site Conditions is provided. I further certify, based on such review and on my professional judgment, that the proposed activities are necessary and the activity design, development specifications, and implementation procedures are

appropriate to remediate the pollution present at the area of the site where activity is proposed, and the oversight and monitoring provisions, and contingency measures, all described in the work plan and/or monitoring plan, are consistent with prevailing standards and guidelines, and the proposed activities are not expected to cause changes in groundwater or surface water quality beyond the designated zone of influence, are not expected to adversely affect any identified underground source of drinking water supply or water supply well, and are not expected to adversely affect any underground utilities, underground structures or leaching fields. I also certify that, in my professional judgment, the proposed work plan and monitoring plan are sufficient to identify any unpredicted adverse effects, and provide a mechanism such that the activity will be stopped and such effects mitigated.”

- and (ii) “I am aware that any professional services rendered pursuant to this general permit shall conform to the applicable rules of professional conduct of the Regulations of Connecticut State Agencies (for P.E.s section 20-300-12(a) and for LEPs section 22a-133v-6). I am also aware that there are significant penalties for false statements in this certification, including the possibility of fine and imprisonment for knowingly making false statements”.

(D) *Exception*

For placement of an oxygen releasing substance, in amounts that release less than 150 pounds of oxygen total, into an open excavation resulting from removal of, or remediating a release from, a residential heating oil tank with a capacity less than 2,100 gallons:

- (i) Section 4(c)(4)(B) of this general permit does not apply (*however*, Section 4(c)(4)(C) of this general permit still may apply as provided in Sections 3(e)(2) and (3) of this general permit);
- (ii) The *property owner* of each parcel comprising the area of activity or zone of influence, if not the registrant, shall submit the following certification in lieu of the statement required pursuant to Section 4(c)(4)(B):
- “I certify that I have thoroughly and completely reviewed the site conditions report and site plan, including the past and present uses and fill history of the site, and that the submitted information pertinent to the parcel I own is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.” ; and
- (iii) The *principal remediation contractor*, if different from the registrant or document preparer, shall also submit the certification required in Section 4(c)(4)(A) of this general permit.

**(d) *Where to File a Registration and Other Related Documents***

- (1) A registration shall be filed with the commissioner at the following address:

CENTRAL PERMIT PROCESSING UNIT  
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

- (2) If the proposed activity or zone of influence is within any part of an aquifer protection area or a public drinking water source water area, or if the proposed activity is on land owned by an owner or operator of a public water supply, a duplicate or certified copy of the registration filed with the department shall be filed with the Department of Public Health at the following address:

DRINKING WATER SECTION  
DEPARTMENT OF PUBLIC HEALTH  
410 CAPITOL AVENUE - MS #51 WAT  
P.O. BOX 340308  
HARTFORD, CT 06134-0308

- (3) If the proposed activity or zone of influence is within 200 feet of any water supply well pumping over ten (10) gallons per minute, or within seventy-five (75) feet of any other water supply well, a duplicate or certified copy of the registration filed with the department shall be filed with the local Director of Health.

**(e) *Additional Information***

The commissioner may require a registrant to submit additional information, which the commissioner reasonably deems necessary to evaluate the consistency of the subject activity with the requirements for authorization under this general permit.

**(f) *Action by Commissioner***

- (1) The commissioner may reject without prejudice a registration if it is determined that it does not satisfy the requirements of Section 4(c) of this general permit or more than thirty (30) days have elapsed since the commissioner requested that the registrant submit additional information or the required fee and the registrant has not submitted such information or fee. Any registration re-filed after such a rejection shall be accompanied by the fee specified in Section 4(c)(1) of this general permit.
- (2) The commissioner may disapprove a registration if it is found that the subject activity is inconsistent with the requirements for authorization under Section 3 of this general permit, or for any other reason provided by law.
- (3) Disapproval of a registration under this subsection shall constitute notice to the registrant that the subject activity may not lawfully be conducted or maintained without the issuance of an individual permit.
- (4) The commissioner may approve a registration pursuant to this general permit, or may issue a certificate of coverage in lieu of an approval, when an approval is not required pursuant to Section 3(e)(1) of this general permit and when a certification for site conditions has been submitted by the registrant if required.
- (5) The commissioner may approve a registration with reasonable conditions, in lieu of either disapproval or issuance of a certificate of coverage pursuant to this general permit. If the commissioner approves a registration with conditions, the permittee shall be bound by such conditions as if they were a part of this general permit.

- (6) Rejection, disapproval, or approval of a registration shall be in writing.

## **Section 5. Conditions of This General Permit**

The permittee shall at all times meet the requirements for authorization set forth in Section 3 of this general permit. In addition, a permittee shall ensure that activities authorized by this general permit are conducted in accordance with this Section of this general permit.

### **(a) Operating Conditions**

- (1) Authorized activities shall be conducted in accordance with the work plan submitted with the registration, and, if applicable, any modification or conditions in an approval of registration issued pursuant to this general permit, and shall be under the supervision of a P.E. or LEP except for activity that involves placement of an oxygen releasing substance in amounts that release less than 150 pounds of oxygen total into an open excavation resulting from removal of, or remediating a release from, a residential heating oil tank with a capacity less than 2,100 gallons. If a Certification for Site Conditions has been submitted pursuant to Section 4(c)(4)(C) of this general permit, the person making such certification shall be the person providing such supervision.
- (2) Activities authorized under this general permit shall not occur without the written consent of the property owner(s). A copy of such consent(s) shall be included in the registration submitted pursuant to Section 4 of this general permit if the registrant is not the property owner(s). Such consent is not required for public rights of way that are within the zone of influence but not otherwise an area of activity pursuant to this general permit, provided subsurface utilities in such rights of way are identified as a sensitive site condition and evaluated pursuant to this general permit.
- (3) The local director of health, and any abutting property owners within twenty-five (25) feet of the anticipated zone of influence, shall be notified of the nature of the proposed activity, at least forty-eight (48) hours before the emplacement of oxygen releasing substances into an open excavation, unless the proposed discharge will provide less than 150 pounds of supplied oxygen. All abutting property owners and the local director of health shall be notified in writing or by other methods acceptable to the commissioner at least fifteen (15) days before initiation of any other authorized activity. Such notices shall provide the name and telephone number of a point of contact who is knowledgeable of the proposed activity. A summary of notification activity and copies of any written notifications shall be included in the first report submitted to the commissioner pursuant to Section 5(c)(3) of this general permit.
- (4) Nutrient additions and pH amendments shall be limited to the minimum concentrations required to optimize aerobic biological activity.
- (5) Activities authorized pursuant to Sections 3(a)(1) through 3(a)(6) of this general permit shall not occur until any mobile free product present has been removed to the maximum extent technically practicable, taking into consideration soil and site characteristics.
- (6) Activities pursuant to this general permit shall not occur unless there is qualitative or quantitative *evidence of a release* of organic substances believed to be biodegradable in the area where the discharge is proposed to occur or expected to affect groundwater quality.

- (7) Substances authorized for discharge pursuant to this general permit shall not be discharged, injected, or emplaced into, or within fifteen (15) feet of, any well designated as a discharge monitoring well in the registration or by the commissioner in an approval of registration, except as site conditions dictate and technical justification is included in the monitoring plan, or any well explicitly excluded by any approval of registration issued pursuant to this general permit.
- (8) If *short term discharge* of treatment chemicals pursuant to Section 3(a)(8) of this general permit is needed to maintain a condition facilitating the continued implementation of other activities pursuant to this general permit, such discharge of treatment chemicals shall not occur until a supplemental written work plan, including proposed monitoring of the activity, is submitted, as specified in Section 5(c) of this general permit, and such work plan is approved by the commissioner. The commissioner may approve, approve with conditions, or disapprove any such work plan submitted pursuant to this general permit.
- (9) If *phased activity* is proposed pursuant to this general permit, including scale-up of project scope from an authorized pilot study, the results of each phase shall be evaluated prior to implementation of subsequent phases, and a report of such evaluation along with proposed modifications to the work plan and monitoring plan originally submitted with the registration shall be submitted, as specified in Section 5(c) of this general permit, not less than twenty eight (28) days prior to the proposed date of implementation of the subsequent phase. The commissioner may approve, approve with conditions, or disapprove any such modified work plan or monitoring plan submitted pursuant to this general permit. Activity shall not commence prior to receipt of such approval unless otherwise specified in an earlier approval by the commissioner. *However*, if an approval is not required pursuant to Section 3(e)(4) of this general permit, implementation may commence thirty (30) days after the report/plan was received by the department.
- (10) **Discharge Limits**
  - (A) Hydrogen peroxide solutions discharged pursuant to this general permit shall not exceed a concentration of 500 mg/l.
  - (B) Ozone enriched air introduced to the subsurface pursuant to this general permit shall not exceed five percent (5%) ozone.
  - (C) No other discharge shall exceed 125 percent of the amount or concentration proposed in the work plan.
- (11) Activities authorized under this general permit shall not cause atmospheric oxygen concentrations to be enriched within fifty (50) feet of any fuel dispensing or use area.
- (12) The permittee shall have the responsibility to make notifications and file reports required under this general permit. The permittee shall also have the responsibility to make notifications, file reports, and implement contingency actions specified in any work plan or monitoring plan approved by the commissioner or certified under Section 4(c)(4)(C) of this general permit. In addition, the permittee shall make any monitoring results or data available to the commissioner upon request.



**(b) Monitoring Requirements**

**(1) Monitoring Frequency**

- (A) Monitoring of activities pursuant to Section 3(a)(1) through 3(a)(7) of this general permit shall be conducted at least once prior to initiation of activity pursuant to this general permit (“baseline conditions”), once thirty (30) to forty-five (45) days after initiation of such activity, once seventy-five (75) to ninety (90) days after initiation of such activity, and quarterly thereafter for a period of eighteen (18) months after either cessation of active discharge, injection, or emplacement or end of anticipated oxygen releasing activity, whichever is later, or as such monitoring is otherwise increased or modified in an approval by the commissioner, or increased in a monitoring plan.
- (B) Monitoring of activities pursuant to Sections 3(a)(3) through 3(a)(7) of this general permit that include *active pressurized discharge* into groundwater shall, at a minimum, be conducted at monitoring locations identified in the work or monitoring plan and at the nearest potable water supply well identified in the monitoring plan once prior to initiation of activity pursuant to this general permit (“baseline conditions”), once in the second week after the start of active pressurized discharge, monthly for the first quarter after the start of any active pressurized discharge, and quarterly thereafter for a period of eighteen (18) months after either cessation of active discharge, injection, or emplacement or end of anticipated oxygen releasing activity, whichever is later, or as otherwise described in a monitoring plan approved by the commissioner, or as such monitoring is otherwise increased or modified in an approval by the commissioner. *In addition*, if active pressurized discharge continues for more than one day, pressures and temperatures at the injection points and field parameters specified in Section 5(b)(2)(A) of this general permit shall be monitored at monitoring locations identified for this objective in the monitoring plan at least once daily during the first two weeks of the period of active discharge.
- (C) Monitoring of activities pursuant to Section 3(a)(8) of this general permit shall be as specified in the work plan approved pursuant to Section 3(e)(5) of this general permit, or as such monitoring is otherwise increased or modified in an approval by the commissioner.
- (D) Monitoring that is required more than ninety (90) days after initiation of authorized activity may be conducted concurrently with any quarterly monitoring schedule already established for the site.
- (E) In addition to the requirements of Sections 5(b)(1)(A) and 5(b)(1)(B) of this general permit, water supply well monitoring that is required pursuant to Sections 5(b)(2)(C) through 5(b)(2)(E) of this general permit shall also be conducted twenty four (24) months after either cessation of active discharge or end of anticipated oxygen releasing activity, whichever is later, or as such monitoring is otherwise increased or modified in an approval by the commissioner, or increased in a monitoring plan.

**(2) Monitoring Locations and Parameters**

- (A) Wells designated as discharge or activity monitoring wells in the registration, or so designated in any approval of registration by the commissioner, shall be sampled and analyzed for the following:

Field measurements, which shall be taken and reported in a log to be submitted with laboratory analysis results:

- Oxidation-Reduction Potential (ORP),
- Dissolved Oxygen (DO),
- Dissolved Carbon Dioxide (DCO<sub>2</sub>),
- Conductivity,
- pH,
- Turbidity,
- Temperature,
- Water Surface Elevation; and

any project-specific monitoring parameter identified in the monitoring plan developed pursuant to Section 4(c)(3)(D) of this general permit, other than those included in Section 5(b)(2)(B) of this general permit, or, if no monitoring plan is required, any constituent identified in fulfillment of the requirement of Sections 4(c)(3)(A)(iii) and 4(c)(3)(C) of this general permit, using appropriate methods consistent with Section 5(b)(3) of this general permit; and

any substance required in any approval of registration, using appropriate methods consistent with Section 5(b)(3) of this general permit.

- (B) Wells specifically designated as downgradient discharge monitoring wells in the registration, or so designated in any approval of registration by the commissioner, shall, *in addition* to the requirements of Section 5(b)(2)(A) of this general permit, be sampled and analyzed for the following:

Volatile Organic Chemicals (EPA Method 524.2 or 8260B or other methodology approved by the commissioner);

Gasoline Oxygenates, including TBA, MTBE, TAME, and related substances (analysis shall be by EPA Method 524.2, or other methodology approved by the commissioner); and

Connecticut Extractable Total Petroleum Hydrocarbons, or other methodology approved by the commissioner to determine TPH.

- (C) Potable water supply wells within seventy-five (75) feet of the authorized activity shall be sampled and analyzed for the following:

Field measurements, which shall be taken and reported in a log to be submitted with laboratory analysis:

- Oxidation-reduction Potential (ORP),
- Dissolved Oxygen (DO),
- Conductivity,
- pH,
- Turbidity; and

Volatile Organic Chemicals (EPA Method 524.2 or other methodology approved by the commissioner);

Gasoline Oxygenates, including TBA, MTBE, TAME, and related substances (analysis shall be by EPA Method 524.2, or other methodology approved by the commissioner);

Connecticut Extractable Total Petroleum Hydrocarbons, or other methodology approved by the commissioner to determine TPH; and

any additional project-specific constituent of concern identified in fulfillment of the requirement of Sections 4(c)(3)(A)(iii) and 4(c)(3)(C) of this general permit, unless excluded from the project-specific monitoring parameter list in a monitoring plan developed pursuant to Section 4(c)(3)(D) of this general permit, and any additional monitoring parameter required in any approval of registration, using appropriate methods consistent with Section 5(b)(3) of this general permit.

- (D) Potable water supply wells more than seventy five (75) feet but within 500 feet of activities pursuant to Sections 3(a)(1) through 3(a)(6) and 3(a)(8) of this general permit, or their expected zone of influence, shall be sampled and analyzed for the parameters specified in Section 5(b)(2)(C) of this general permit if:
  - (i) the authorized activity is in an area where the water table is within fifteen (15) feet of the bedrock surface,
  - (ii) the well is a public water supply well, or
  - (iii) sampling the well is proposed in the monitoring plan, or required in any approval of registration by the commissioner.
- (E) Potable water supply wells within 500 feet of activities pursuant to Section 3(a)(7) of this general permit or the expected zone of influence of such activities shall be sampled and analyzed for the parameters specified in Section 5(b)(2)(C) of this general permit.
- (F) Downgradient monitoring wells, when required pursuant to this general permit, shall be installed at a location and depth that monitors a point that is not further from the identified zone of influence than the distance groundwater travels in six (6) months, based on hydrogeologic evaluation of the site, unless the proposed monitoring frequency and duration in the monitoring plan are adjusted, based on the site hydrogeologic analysis, from those specified in Section 5(b)(1) of this general permit.

**(3) Sampling and Analysis Requirements**

- (A) All discharge monitoring wells identified in the monitoring plan submitted with the registration, or in any approval of registration issued pursuant to this general permit, shall be installed at least seven (7) days prior to the first sampling required pursuant to Section 5(b)(1)(A) of this general permit.
- (B) All sampling and analyses required to monitor activities authorized by this general permit shall, unless otherwise specified in this general permit, comply with the following requirements:

- (i) all samples collected to monitor groundwater impacts shall be grab samples composed solely of groundwater representative of the subject groundwater, and shall be collected in a manner consistent with the department's expected standards of care for such sampling;
  - (ii) laboratory analyses, and the reporting of such analyses, shall be conducted by a laboratory certified by the Connecticut Department of Public Health, and analyses shall be performed using methods consistent with Connecticut's Reasonable Confidence Protocols or methodologies that contain a level of quality control and documentation at least equivalent to the reasonable confidence protocols.
  - (iii) monitoring required by this general permit for temperature, dissolved oxygen, dissolved carbon dioxide, pH, conductivity, turbidity, and oxidation-reduction potential shall be conducted in the field using field test kits or electronic probes, as appropriate.
- (C) The permittee shall periodically calibrate and perform maintenance on all monitoring and field equipment used to monitor the groundwater, as required under this general permit, at intervals that will ensure the accuracy of measurements, and shall document such calibration in field logs.

**(4) Monitoring Exceptions**

- (A) In addition to the monitoring requirements specified in Sections 5(b)(1) and 5(b)(2) of this general permit, monitoring, including monitoring of discharge volume and concentration, proposed in any work plan or monitoring plan to support an approval of registration, or support a certification for site conditions if applicable, shall be conducted as proposed in such documents, or as otherwise increased or modified in an approval of registration by the commissioner pursuant to Section 5(b)(4)(D) of this general permit.
- (B) If the authorized activity is oxygen releasing substance emplacement into open excavations resulting from removal of, or remediating a release from, tanks with a capacity of less than 2,100 gallons used to store heating oil, and the total discharge releases less than 150 pounds of oxygen,
- (i) the monitoring requirements specified in Sections 5(b)(2)(A) and 5(b)(2)(B) of this general permit are not required unless otherwise specified in an approval of registration or work plan or monitoring plan, provided that any monitoring results that are collected shall be submitted in the report required by Section 5(c)(3)(B) or as otherwise required by Section 5(c)(4) of this general permit; and
  - (ii) any monitoring required by Sections 5(b)(2)(C) and 5(b)(2)(D) of this general permit shall be conducted initially within two days after discharge initiation, to establish "baseline conditions", then quarterly for four (4) quarters, and then annually for the remaining monitoring period, or as otherwise increased or modified in an approval of registration or in a work plan or monitoring plan. *However*, if no recoverable free product was present at any time prior to the authorized emplacement, such monitoring may be discontinued after the first year, or as otherwise extended or modified in an approval of registration or in a work plan or monitoring plan.

- (C) If the authorized activity is oxygen releasing substance injection or emplacement pursuant to Sections 3(a)(2) and 3(a)(3) of this general permit, or oxygen introduction pursuant to Section 3(a)(6) of this general permit, at a site where a heating oil tank with a capacity equal to or smaller than 2,100 gallons is or had been present, and the discharge releases less than 150 pounds of oxygen in a twelve (12) month period,
- (i) the monitoring requirements specified in Sections 5(b)(2)(A) and 5(b)(2)(B) of this general permit are not required, for the first activity phase only, unless otherwise specified in an approval of registration or work plan or monitoring plan, provided that any monitoring results that are collected shall be submitted in the report required by Section 5(c)(3)(B) of this general permit; and
  - (ii) any monitoring required by Sections 5(b)(2)(C) and 5(b)(2)(D) of this general permit shall be conducted initially before discharge initiation, to establish baseline conditions, then quarterly for one year, and then annually for the remaining monitoring period, or as otherwise increased or modified in an approval of registration or in a work plan or monitoring plan. *However*, if no recoverable free product was present at any time prior to the authorized emplacement, monitoring required by Sections 5(b)(2)(C) and 5(b)(2)(D) of this general permit may be discontinued after two (2) years or as otherwise extended or modified in an approval of registration or in a work plan or monitoring plan.
- (D) The commissioner, when approving a registration, may increase, or modify the monitoring requirements specified in Section 5(b) of this general permit, or otherwise required at the site pursuant to this general permit, in order to protect human health or the environment. Such action by the commissioner may be taken for any proposed activity, in lieu of issuance of a certificate of coverage, even if an approval is not otherwise required pursuant to this general permit.

**(c) Reporting and Record Keeping Requirements**

- (1) Unless otherwise stated in this general permit, or otherwise specified in writing by the commissioner, notifications, plans, and reports required by this general permit, shall identify the permittee name, department assigned permit identification numbers, site name, site location, street address, and town, and shall be submitted to:

COORDINATOR – IN SITU GROUNDWATER REMEDIATION  
 REMEDIATION DIVISION – BUREAU OF WATER PROTECTION AND LAND REUSE  
 CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION  
 79 ELM STREET  
 HARTFORD, CT 06106-5027

**(2) Report of Monitoring Data Evaluation**

The permittee shall submit, on a form prescribed by the commissioner, a summary review of the monitoring data relative to compliance with this general permit within thirty (30) days of sampling. Monitoring analytical reports and field logs shall not be submitted with such summary unless required by the commissioner. However such data shall be incorporated in reports and notifications submitted pursuant to Sections 5(c)(3) and 5(d) of this general permit. Furthermore, field data shall be evaluated pursuant to Section 5(d) of this general permit within forty-eight (48)

hours of collection, and the date and results of such evaluation shall be noted on the report of monitoring data evaluation form.

**(3) Other Required Reports**

Except as specified in Section 5(c)(4) of this general permit, the submittal of the following plans/reports is required under this general permit:

- (A) A report of the site activities conducted in accordance with the work plan shall be submitted within forty-five (45) days after the cessation of active discharge;
- (B) A final report summarizing all site activity and monitoring shall be submitted within sixty (60) days after completion of all activity and monitoring required pursuant to this general permit. Such report shall be prepared by the LEP or P.E. supervising the authorized activity pursuant to Section 5(a)(1) of this general permit;
- (C) If phased activity pursuant to this general permit, including scale-up of project scope from an authorized pilot study, is proposed, an evaluation report of the previous phase, along with recommendations for any modifications to the work plan or monitoring plan, and an update of any Certification for Site Conditions previously submitted if the activity scope is significantly changed, shall be submitted not less than twenty-eight (28) days prior to the planned implementation date of the subsequent phase, and such submittal shall be subject to review and approval as specified in Sections 3(e)(4) and 5(a)(9) of this general permit; and
- (D) If short term discharge of treatment chemicals is proposed pursuant to Section 3(a)(8) of this general permit to maintain a condition facilitating the continued implementation of other activities pursuant to this general permit, a report detailing why such discharge is needed and including a supplemental work plan for such discharge and proposed monitoring shall be submitted for review and approval not less than fourteen (14) days prior to the proposed discharge date, and such submittal shall be subject to review and approval as specified in Sections 3(e)(5) and 5(a)(8) of this general permit.

**(4) Reporting Exceptions**

- (A) For activities at supervised remediation sites, permittees are, except as otherwise specified in writing by the commissioner, not required to submit any report required under Sections 5(c)(3)(A) or 5(c)(3)(B) of this general permit, provided the information referenced in Sections 5(c)(3)(A) and 5(c)(3)(B) of this general permit is included in a Remedial Action Report submitted separately to the commissioner as required under the applicable remedial program. Notifications of certain conditions must be made in accordance with Section 5(d) of this general permit, and reports pursuant to Section 5(c)(2) of this general permit are required.
- (B) For activities pursuant to Sections 3(a)(1) through 3(a)(6) of this general permit which are to address pollution at a location not a supervised remediation site where a heating oil tank with a capacity less than 2,100 gallons is or had been present, and which result in a total release of less than 150 pounds of oxygen, permittees are, except as otherwise specified in writing by the commissioner or in a work plan or monitoring plan, not required to submit reports pursuant to the requirements of Section 5(c)(3)(A) of this general permit, however the information referenced in Section 5(c)(3)(A) of

this general permit shall be incorporated in the report submitted pursuant to Section 5(c)(3)(B) of this general permit. If monitoring is required at such sites pursuant to this general permit, notifications of certain conditions must be made in accordance with Section 5(d) of this general permit, and reports pursuant to Section 5(c)(2) of this general permit are required.

- (5) Except as otherwise specified in writing by the commissioner, each analytical result of a groundwater sample taken and all data generated by any other monitoring, including field parameter monitoring, conducted under this general permit shall be retained at the subject site for at least five (5) years from the date such result or data was generated or received by the permittee, whichever is later. The commissioner may specify a longer retention period as reasonably deemed necessary upon written notice to the permittee stating the reasons for such longer period. If, during the required retention period, the commissioner, under chapter 446k of the Connecticut General Statutes, issues an order or commences a civil action against the permittee, such retention period shall be extended as necessary.
- (6) The requirements of Section 5(c)(5) of this general permit for retention of records at the subject site are waived after all such information is included in a remedial action report submitted to the commissioner in accordance with the provisions of sections 22a-133x, 22a-133y, or 22a-134a of the Connecticut General Statutes, sections 22a-449(c)-105(h) or 22a-449(d)-106 of the Regulations of Connecticut State Agencies, or an order of the commissioner issued pursuant to section 22a-432 of the Connecticut General Statutes, or after all such information is included in a final report submitted to the commissioner pursuant to Section 5(c)(3)(B) of this general permit. Other statutory or regulatory provisions requiring retention of records on site are unaltered.
- (7) The requirements of Section 5(c)(5) of this general permit for retention of records at the subject site are waived for residential properties, provided that the records are retained in the required manner at the place of business of the P.E. or LEP responsible for supervising the authorized activity under this general permit, or the place of business of the principal remediation contractor when no P.E. or LEP oversight is required for activity referenced in Section 3(a)(1) of this general permit. Other statutory or regulatory provisions requiring retention of records on site are unaltered.
- (8) In addition to the reporting requirements specified in Sections 5(c)(1) through 5(c)(4) of this general permit, the permittee shall submit reports as required by any approval of registration issued pursuant to this general permit.

**(d) Notification and Mitigation of Certain Conditions**

- (1) When required, pursuant to this general permit or any approval, immediate or twenty-four (24) hour notification to the department shall be to the Remediation Division of the Bureau of Water Protection and Land Reuse at:

Phone Number: 860-424-3705 or

Telefax Number: 860-424-4057.

- (2) Notifications or reports required pursuant to this general permit or any approval, including any required follow-up written notifications, shall be submitted to:

COORDINATOR – IN SITU GROUNDWATER REMEDIATION  
REMEDATION DIVISION – BUREAU OF WATER PROTECTION AND LAND REUSE  
CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5027.

- (3) The department shall be notified within twenty-four (24) hours if field monitoring required pursuant to this general permit is not conducted at the specified time. If such notification is by telephone, a follow-up written notification shall be submitted within forty-eight (48) hours.
- (4) Written notifications and reports required by this general permit shall in letter form identify the permittee name, department assigned permit identification numbers, site name, site location, street address, town, and date of certificate of coverage or approval of registration, if such certificate or approval was issued; monitoring location triggering notification or report, date(s) of sampling and analysis, monitored constituent(s) triggering notification or report, and reported concentration(s); a summary of any response action taken or planned; and the name and telephone number of a person the department may contact for further information.
- (5) **Supply Well Polluted Above Standards**

If post-baseline monitoring of any water supply well detects any constituents above the standards in Appendix C to sections 22a-133k-1 to 3 of the Regulations of Connecticut State Agencies, above a maximum contaminant level applicable to public water supply systems for any contaminant listed in section 19-13-B102 of the Public Health Code, or above contaminant levels listed on the state drinking water action level list established pursuant to section 22a-471 of the Connecticut General Statutes, the permittee shall, within twenty-four (24) hours of receipt of the analytical results by the permittee or the permittee's consultant or engineer, verbally notify the department. The permittee shall also, within twenty-four (24) hours, provide written notification to the department, the owner of record of the property upon which any such water supply well is located, at least one occupant of each dwelling unit or business obtaining drinking water from such water supply well (except for community water supply systems), the local director of public health, and, if the affected well is a public water supply well, the Department of Public Health and the water system operator.

The permittee shall also, within forty-eight (48) hours, provide bottled water or another alternative supply of potable water, except for community water supply systems, and shall resample the affected supply well, and any other wells as may be required by the commissioner. The permittee shall, within five (5) days, provide to the department for review and approval a follow-up written report of the initial mitigation actions with recommendations for further actions. Any such additional proposed mitigation measures shall be implemented not later than seven (7) days after approval by the commissioner.

- (6) **Supply Well Affected**

If post-baseline monitoring of a water supply well detects any monitored organic chemical constituents above twice the analytical reporting limit (or, if higher, twenty-five percent (25%) greater than any established baseline condition for the water supply well) or an increase in the concentration of any monitored inorganic



constituent of concern greater than twenty-five percent (25%) over baseline conditions, such detection or increase shall, unless otherwise specified by the commissioner in writing, be reported in writing to the department within seven (7) days of receipt of the analytical results by the permittee or the permittee's consultant or engineer.

The permittee shall, within fourteen (14) days after determining the presence of such detection or increase, resample any supply well so affected to confirm the detection or increase, and shall report such resampling results to the department within five (5) days of receipt of the analytical results by the permittee or the permittee's consultant or engineer, along with recommendations for further actions. Any such recommended actions shall be implemented not later than seven (7) days after approval by the commissioner.

**(7) Field Parameter Results Show Change**

If there is a substantial change in oxidation reduction potential (Eh greater than 200 mv change from baseline conditions) or a change in pH of more than two (2) standard units (in comparison to baseline conditions) observed at any of the discharge monitoring wells, such change shall be reported in writing to the department within forty-eight (48) hours of field sampling.

**(8) Chemical Monitoring Data Results Show Change**

If post-baseline monitoring of down-gradient discharge monitoring wells determines: an increase in the concentration of any discharged substance being monitored, project-specific constituent of concern, or inorganic or volatile organic chemical greater than twenty-five percent (25%) over baseline conditions; or, for a site in an area where water supply wells are present within 500 feet downgradient or the groundwater classification is GA or GAA, any detection of such parameters above standards in appendix C to sections 22a-133k-1 to 3 of the Regulations of Connecticut State Agencies, such increase or detection shall, unless otherwise specified by the commissioner in writing, be reported in writing to the department within seven (7) days of receipt of the analytical results by the permittee or the permittee's consultant or engineer.

**(9) Potential Permit Non-compliance**

If monitoring of authorized activities determines the limits specified in Section 5(a)(10) of this general permit have been exceeded, or a potable water supply well has been confirmed to be affected in accordance with Section 5(d)(6) of this general permit, or monitoring of hydraulic conditions, field parameters, or chemical quality determines that the authorized discharge's zone of influence identified in the registration has been exceeded, or if activity monitoring within the area of authorized activity and zone of influence determines the limits specified in Section 5(a)(10) of this general permit or the zone of influence identified in the registration may become exceeded or a potable water supply well may become affected with continued discharge, the discharge, if active, shall immediately be discontinued and the commissioner shall immediately be notified of this determination and action.

The permittee shall immediately implement the appropriate contingent measures as described in the work plan and take any other actions necessary to limit migration of pollutants or specified by the commissioner in response to such notification of determination. The permittee shall provide, within five (5) days of the initial notification, follow-up written notification to the department, including a summary of the monitoring data and the initial actions taken, in accordance with Section 6(e)

of this general permit. The permittee or the permittee's consultant or engineer shall, within fourteen (14) days of such determination, submit to the commissioner for review and approval a written evaluation of the condition with recommended changes to the work plan and additional measures to assess, monitor, and mitigate impact beyond the authorized zone of influence. Any such additional mitigation measures shall be implemented not later than seven (7) days after approval by the commissioner.

- (10) Notifications and reports required by Sections 5(d)(5), 5(d)(6), and 5(d)(8) of this general permit may, as applicable, be identified as notifications required under section 22a-6u of the Connecticut General Statutes. They shall not meet the requirements of section 22a-6u of the Connecticut General Statutes unless they are specifically so identified and meet all requirements of section 22a-6u of the Connecticut General Statutes regarding notifying party and notification content.
- (11) Reports of discharges, spills, or other releases shall independently be made as required pursuant to section 22a-450 of the Connecticut General Statutes and all associated regulations.

**(e) *No Remediation Assurance***

No provision of this general permit and no action or inaction by the commissioner shall be construed to constitute an assurance by the commissioner that any actions taken pursuant to this general permit will achieve remediation goals, result in compliance, or prevent or abate pollution. No assurance is implied that monitoring for compliance with the requirements of this general permit will be sufficient to demonstrate that a release at a site has been remediated; additional monitoring may be necessary to demonstrate that the requirements of sections 22a-133k-1 to 3 of the Regulations of Connecticut State Agencies are met. Furthermore, verifications, as defined in section 22a-133v-1(z) of the Regulations of Connecticut State Agencies, that are based upon monitoring results from monitoring wells used as discharge points or located within the zone of influence may be rejected if technical justification for the validity of data from such wells is not provided.

## **Section 6. General Conditions**

**(a) *Erosion and Sediment Controls***

If activities authorized by this general permit create a potential for pollution due to the tracking or erosion of soil, erosion and sediment control measures shall be installed and maintained in compliance with the standards set forth in the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, as revised, established pursuant to section 22a-328 of the Connecticut General Statutes.

**(b) *Waste Management***

Solid waste, including but not limited to contaminated soils or sludges, that may be generated as a result of the activities authorized by this general permit must be disposed of in accordance with applicable federal, state, and local law. Some or all of these wastes may be hazardous waste identified in accordance with Section 3001 of the Federal Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) or other wastes of special concern requiring department approval prior to disposal. It is the responsibility of the permittee to ensure that all wastes generated are properly identified and that all necessary department approvals are secured prior to disposal of such wastes.

**(c) *Regulations of Connecticut State Agencies Incorporated into this General Permit***

The permittee shall comply with all applicable law, including without limitation the following Regulations of Connecticut State Agencies:

**(1) Section 22a-430-3**

Subsection (b) General

- subparagraph (1)(D) and subdivisions (2), (3), (4) and (5)

Subsection (c) Inspection and entry

Subsection (d) Effect of a permit

- subdivisions (1) and (4)

Subsection (e) Duty to comply

Subsection (f) Proper operation and maintenance

Subsection (g) Sludge disposal

Subsection (h) Duty to Mitigate

Subsection (i) Facility modifications; Notification

- subdivisions (1) and (4)

Subsection (j) Monitoring, records and reporting requirements

- subdivisions (1), (6), (8), (9), and (11)

(except subparagraphs (9)(A)(2,10,11), (9)(B), (9)(C), and 11(B))

Subsection (n) Enforcement

Subsection (o) Resource Conservation

Subsection (p) Spill Prevention and Control

Subsection (q) Instrumentation, Alarms, Flow Recorders

**(2) Section 22a-430-4**

Subsection (p) Permit revocation, denial or modification

Appendices

**(3) Section 22a-430-8**

Subsection (c) (regarding Class V injection wells)

Subsection (e) (regarding underground sources of drinking water)

**(d) *Reliance on Registration***

In evaluating a registration, the commissioner relies on information provided by the registrant. If such information proves to be false or incomplete, an authorization pursuant to this general permit may be suspended or revoked in accordance with law, and the commissioner may take any other legal action provided by law.

**(e) *Duty to Correct and Report Violations***

Upon learning of a violation of a condition of this general permit, a permittee shall immediately take all reasonable action to determine the cause of such violation, correct such violation and mitigate its results, prevent further such violation, and report in writing such violation and such corrective action to the commissioner within five (5) days of the permittee's learning of such violation. Such report shall be certified in accordance with Section 6(g) of this general permit.

**(f) *Duty to Provide Information***

If the commissioner requests any information pertinent to the authorized activities or to determine compliance with this general permit or with any approval of registration pursuant to this general permit, the permittee shall provide such information in writing within thirty (30) days of such request. Such information shall be certified in accordance with Section 6(g) of this general permit.

**(g) *Certification of Documents***

Any document, including but not limited to any notice, which is submitted to the commissioner under this general permit shall be signed by, as applicable, the registrant or the permittee in accordance with section 22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

“I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.”

**(h) *Date of Filing***

For purposes of this general permit, the date of filing with the commissioner of any document is the date such document is received by the commissioner. If any date specified in this general permit falls on a Saturday, Sunday, or legal holiday, such deadline shall be the next business day thereafter.

**(i) *False Statements***

Any false statement in any information submitted pursuant to this general permit may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.

**(j) *Correction of Inaccuracies***

Within fifteen (15) days after the date a permittee becomes aware of a change in any of the information submitted pursuant to this general permit, or becomes aware that any such information is inaccurate or misleading, or that any relevant information has been omitted, such permittee shall correct the inaccurate or misleading information or supply the omitted information in writing to the commissioner. Such information shall be certified in accordance with Section 6(g) of this general permit. The provisions of this subsection shall apply both while a request for authorization under this general permit is pending and after such authorization becomes effective pursuant to Section 3(e) of this general permit.

**(k) *Transfer of Authorization***

An authorization under this general permit is transferable only in accordance with the provisions of section 22a-60 of the Connecticut General Statutes.

**(l) *Other Applicable Law***

Nothing in this general permit shall relieve the permittee of the obligation to comply with any other applicable federal, state, and local law, including but not limited to the obligation to obtain any other authorizations required by such law.

**(m) *Other Rights***

This general permit is subject to and does not derogate any present or future rights or powers of the State of Connecticut and conveys no rights in real or personal property nor

any exclusive privileges, and is subject to all public and private rights and to any federal, state, and local laws pertinent to the property or activity affected by such general permit. In conducting any activity authorized hereunder, the permittee shall not cause pollution, impairment, or destruction of the air, water, or other natural resources of this state. The issuance of this general permit shall not create any presumption that this general permit should or will be renewed.

## Section 7. Commissioner's Powers

**(a) *Abatement of Violations***

The commissioner may take any action provided by law to abate a violation of this general permit, including the commencement of proceedings to collect penalties for such violation. The commissioner may, by summary proceedings or otherwise and for any reason provided by law, including violation of this general permit, revoke a permittee's authorization hereunder in accordance with sections 22a-3a-2 through 22a-3a-6, inclusive, of the Regulations of Connecticut State Agencies. Nothing herein shall be construed to affect any remedy available to the commissioner by law.

**(b) *General Permit Revocation, Suspension, or Modification***

The commissioner may, for any reason provided by law, by summary proceedings or otherwise, revoke or suspend this general permit or modify it to establish any appropriate conditions, schedules of compliance, or other provisions which may be necessary to protect human health or the environment.

**(c) *Filing of an Individual Permit Application***

If the commissioner notifies a permittee in writing that such permittee must obtain an individual permit to continue lawfully conducting the activity authorized by this general permit, the permittee may continue conducting such activity only if the permittee files an application for an individual permit within sixty (60) days of receiving the commissioner's notice. While such application is pending before the commissioner, the permittee shall comply with the terms and conditions of this general permit and also those specified in any approval of registration. Nothing herein shall affect the commissioner's power to revoke a permittee's authorization under this general permit at any time.

Issued Date: November 24, 2020

*Katherine S. Dykes*  
Commissioner

This is a true and accurate copy of the general permit executed on November 24, 2020 by the Commissioner of the Department of Energy & Environmental Protection.