



PLEASE NOTE

This document, prepared by the [Legislative Counsel Office](#), is an office consolidation of this regulation, current to November 25, 2006. It is intended for information and reference purposes only.

This document is *not* the official version of these regulations. The regulations and the amendments printed in the [Royal Gazette](#) should be consulted to determine the authoritative text of these regulations.

For more information concerning the history of these regulations, please see the [Table of Regulations](#).

If you find any errors or omissions in this consolidation, please contact:

Legislative Counsel Office
Tel: (902) 368-4291
Email: legislation@gov.pe.ca

CHAPTER E-9

ENVIRONMENTAL PROTECTION ACT PETROLEUM HYDROCARBON REMEDIATION REGULATIONS

Pursuant to section 25 of the *Environmental Protection Act* R.S.P.E.I. 1988, Cap. E-9, Council made the following regulations:

1. In these regulations

- | | Definitions |
|--|--------------------------------|
| (a) “acceptable concentration level” means a concentration level of petroleum hydrocarbons in an environmental media that is equal to or less than the applicable concentration level for the same petroleum hydrocarbons as shown in the lookup tables; | acceptable concentration level |
| (b) “Act” means the <i>Environmental Protection Act</i> R.S.P.E.I. 1988, Cap. E-9; | Act |
| (c) “Atlantic PIRI Committee” means the Atlantic Partnership in RBCA Implementation Committee that oversees the implementation of the RBCA process in Prince Edward Island, Nova Scotia, New Brunswick, and Newfoundland and Labrador; | Atlantic PIRI Committee |
| (d) “environmental media” means soil, sediments, surface water, groundwater, air, animals and plants; | environmental media |
| (e) “environmental site assessment” means a systematic process, as outlined in the RBCA User Guidance document, by which a site professional may characterize or delineate the concentrations or quantities of petroleum hydrocarbons in an environmental media and compare those concentrations and quantities with the acceptable concentration levels set out in the lookup tables; | environmental site assessment |
| (f) “limited remedial action” means limited remediation of soil impacts of petroleum hydrocarbons in environmental media at a site as outlined in Schedule B under the direction of a site professional or a Department employee, by repairing, restoring or remediating the site; | limited remedial action |
| (g) “lookup table” means a Tier I or Tier II lookup table as set out in Schedule A; | lookup table |
| (h) “non-aqueous phase liquids” means undissolved petroleum hydrocarbons that float at the top of an aquifer; | non-aqueous phase liquids |
| (i) “petroleum hydrocarbons” means a mixture of hydrocarbons, with or without additives, that is used or can be used as a | petroleum hydrocarbons |

	<p>combustible fuel for an internal combustion engine or for heating purposes, including</p> <ul style="list-style-type: none">(i) gasoline, diesel, heating and airplane fuel, and(ii) lubricants, such as used engine oil;
record of site condition	(j) “record of site condition” means a record of site condition as shown on the form set out in Schedule C completed under subsection 5(2), 8(1) or 12(1);
responsible party	(k) “responsible party” means <ul style="list-style-type: none">(i) the owner of a storage tank system,(ii) the person with the care and control of a storage tank system,(iii) the owner of the site on which a storage tank system is, or was, located, or(iv) a person acting on behalf of any person described in subclauses (i) to (iii);
retail outlet	(l) “retail outlet” means a service station, bulk storage or key lock facility, or other place where petroleum hydrocarbons are sold or kept for sale;
RBCA	(m) “RBCA User Guidance document” means the RBCA Toolkit Version 2 User Guidance document prepared by the Atlantic PIRI Committee, as amended from time to time;
risk based corrective action	(n) “risk based corrective action” or “RBCA” means Risk-Based Corrective Action using a process that originated with the American Society for Testing and Materials, as modified by the Atlantic PIRI Committee and endorsed by the Department responsible for the environment in each of the Atlantic Provinces;
site professional	(o) “site professional” means a person who is licensed to practice engineering in the Province of Prince Edward Island or who is licensed to practice geoscience in another jurisdiction in Canada by a professional licensing body governed by statute in the licensing jurisdiction;
site specific target levels	(p) “site specific target levels” means the target levels specific to a site, for the acceptable concentration levels of petroleum hydrocarbons in an environmental media, that are calculated using the RBCA Version 2 risk assessment model, where site specific information or points of exposure were used in the model run;
source site	(q) “source site” means a site on which or in which petroleum hydrocarbons originated in environmental media;
storage tank	(r) “storage tank” means a structure, or any part of a structure, that is used, or designed to be used, for the underground or aboveground storage of liquid petroleum hydrocarbons;

(s) “storage tank system” means one or more storage tanks together with all connecting piping, both aboveground and underground, including pumps and product transfer apparatus, dyking, and associated spill containment and collection apparatus to a storage tank above the ground surface and any storage tank under the ground surface;

storage tank system

(t) “third party” means a person who owns property affected by petroleum hydrocarbons originating from a source site;

third party

(u) “voluntary remediation agreement” means an agreement made under subsection 13(1) between a responsible party and the Minister to complete a remedial action plan accepted by the Minister. (EC655/06)

voluntary
remediation
agreement

2. (1) These regulations apply to sites where petroleum hydrocarbons are present in the environmental media in excess of the acceptable concentration levels shown in the lookup tables.

Application

(2) The lookup tables in Schedule A indicate the acceptable concentration levels of petroleum hydrocarbons in the soil or groundwater. (EC655/06)

Lookup tables

3. (1) Where a site professional conducts an environmental assessment for a responsible party,

Notify Minister of
findings

(a) the site professional shall report his or her findings to the responsible party as soon as possible after completing the site assessment; and

(b) the responsible party shall notify the Minister as soon as possible after receiving the report of the findings of the site professional if any of the following findings are reported by the site professional:

(i) the petroleum hydrocarbon concentrations at the site are in excess of the applicable acceptable concentration levels;

(ii) the methyl tertiary-butyl ether concentrations at the site are equal to or greater than 15 parts per billion in groundwater.

(2) Where a responsible party is required to give notice to the Minister under clause (1)(b), the responsible party shall give written notice of the findings referred to in clause (1)(b) to all parties that have property that may be affected by the petroleum hydrocarbons in the environmental media of the source site, within three business days of the notice given to the Minister. (EC655/06)

Notice to third
parties

4. (1) Subject to subsection (5), where the Minister

(a) receives a notice under clause 3(1)(b); or

(b) has reason to believe that there may be petroleum hydrocarbons in the environmental media at a site,

Preliminary
determination

the Minister shall make a preliminary determination as to whether limited remedial action is appropriate or not to repair, restore and remedy the site affected.

Reasons for determination

(2) Where the Minister makes a preliminary determination under subsection (1) that limited remedial action is or is not appropriate for the remediation of a site, the Minister shall provide the responsible party with notice of his or her preliminary determination together with reasons for the determination.

Preliminary determination

(3) Where the responsible party for a site receives a notice from the Minister that the Minister has made a preliminary determination under subsection (1) that limited remedial action is not appropriate for the remediation of the site, the responsible party shall cause an environmental site assessment of the site to be made within the time specified by the Minister.

Idem

(4) Where the responsible party for a site receives a notice that the Minister has made a preliminary determination under subsection (1) that limited remedial action is appropriate for the remediation of the site, the responsible party shall

- (a) cause an environmental site assessment of the site to be made in accordance with section 7 to determine the scope of the remedial action that is necessary; or
- (b) use limited remedial action at the site in compliance with the procedures set out in Schedule B.

Exception

(5) No person shall use limited remedial action at a site where any of the following conditions are present at the site:

- (a) the presence of petroleum hydrocarbons is associated with the failure of a petroleum storage tank system at a retail outlet;
- (b) there are multiple sources of petroleum hydrocarbons at the site;
- (c) it is evident that the presence of petroleum hydrocarbons has had an impact on the groundwater at the site;
- (d) measures other than short-term emergency action or excavation are required to address petroleum hydrocarbon vapours within a building;
- (e) non-petroleum hydrocarbons are found at the site, in addition to petroleum hydrocarbons;
- (f) the site characteristics and possible exposure scenarios are incompatible with the RBCA default values set out in the RBCA User Guidance document for the current and reasonably foreseeable future site activities. (EC655/06)

Compare soil samples after remediation

5. (1) Where limited remedial action at a site is completed pursuant to clause 4(4)(b), the site professional shall compare soil samples taken from the site with

(a) the site specific target levels; or
(b) the lookup tables, where there are no site specific target levels,
as determined in accordance with the reference documentation set out in
Schedule B.

(2) Subject to subsection (3), after completion of limited remedial
action at a site, the site professional shall submit a closure report and a
record of site condition to the Minister where the site professional finds
that

- (a) the maximum petroleum hydrocarbon levels at the site are equal
to or less than
 - (i) the acceptable concentration levels set out in the lookup tables,
or
 - (ii) the site specific target levels; and
- (b) none of the conditions referred to in subsection 4(5) are present
at the site.

(3) A site professional may not submit a closure report under
subsection (2) if any of the following conditions are present at the site:

- (a) the soils contain liquid or free petroleum hydrocarbons;
- (b) the surface soils are stained;
- (c) residual petroleum hydrocarbons are present in the soil at
concentrations that cause objectionable odours or cause explosive
conditions with indoor or outdoor air;
- (d) petroleum hydrocarbons in bedrock are present at the site and the
site is determined to have a potable water well by using the reference
documentation set out in Schedule B;
- (e) any of the conditions referred to in subsection 4(5).

(4) The Minister shall review the documents received under subsection
(2) within four weeks of receiving them and by a written notice to the
responsible party to indicate that the Minister

- (a) accepts the documents submitted pursuant to subsection (2); or
- (b) rejects the documents submitted pursuant to subsection (2) if
 - (i) the report indicates that the levels of petroleum hydrocarbons
in the soil samples exceed the acceptable concentration levels in
the lookup tables or the site specific target levels, or
 - (ii) in the Minister's opinion, the remediation procedure or the soil
samples comparison procedure was deficient.

(5) A responsible party who receives a written notice under clause
(4)(b) shall, as directed by the Minister,

- (a) resume limited remedial action within the time frame specified
by the Minister;
- (b) resume limited remedial action until the Minister is satisfied that
the levels of petroleum hydrocarbons are equal to or less than the

acceptable concentration levels of the lookup tables or the site specific target levels; or
 (c) complete an environmental site assessment in accordance with section 7. (EC655/06)

Minister may cause soil samples to be taken

- 6.** The Minister may, at any time,
 (a) cause soil samples to be taken from any site on which limited remedial action has been taken, for the purpose of comparing the samples with the lookup tables or with the site specific target levels; and
 (b) cause a closure report to be completed respecting the site from which soil samples were taken under clause (a). (EC655/06)

Environmental site assessment

- 7.** Every site professional shall, when carrying out an environmental site assessment,
 (a) perform the environmental site assessment in accordance with current RBCA User Guidance document;
 (b) compare the site conditions with the applicable cleanup criteria as described in Schedule D to
 (i) demonstrate whether the groundwater quality is potable or non-potable, and
 (ii) determine the extent of petroleum hydrocarbons in both soil and groundwater by comparison to the applicable acceptable concentration levels; and
 (c) compare soil samples and groundwater samples from the site with the lookup tables or the site specific target levels in accordance with the reference documentation set out in Schedule D. (EC655/06)

Closure report, record of site condition

- 8.** (1) Subject to subsection (2), as soon as possible after completing an environmental site assessment, a site professional shall submit a closure report and a record of site condition to the Minister if a comparison performed pursuant to clause 7(b) indicates
 (a) that the maximum levels of petroleum hydrocarbons from the soil or groundwater samples are equal to or less than
 (i) the site specific target levels, or
 (ii) the applicable concentration levels in the lookup tables where there are no site specific target levels; and
 (b) that none of the conditions referred to in subsection (2) are present at the site.

Conditions precluding closure report

- (2) A site professional shall not submit a closure report under subsection (1) if any of the following conditions of the site are present:
 (a) any of the conditions described in clauses 5(3)(a), (b) or (c);
 (b) the site characteristics and possible exposure scenarios are incompatible with the RBCA default values set out in the RBCA

User Guidance document for the current and reasonably foreseeable future site activities.

(3) The Minister shall review the documents received under subsection (1) within four weeks of receiving them and by a written notice to the responsible party indicate that the Minister

- (a) accepts the documents submitted pursuant to subsection (2); or
- (b) rejects the documents submitted pursuant to subsection (2) if
 - (i) the report indicates that the levels of petroleum hydrocarbons in the soil samples exceed the acceptable concentration levels in the lookup tables or the site specific target levels, or
 - (ii) in the Minister's opinion, the remediation procedure or the soil samples comparison procedure was deficient. (EC655/06)

9. (1) Where

- (a) a responsible party has received the findings of a site professional who has conducted an environmental site assessment for the responsible party in accordance with section 7; and
- (b) the findings indicate that the levels of petroleum hydrocarbons from the soil or groundwater samples are greater than
 - (i) the site specific target levels, or
 - (ii) the applicable concentration levels in the lookup tables where there are no site specific target levels,

the responsible party shall, within 60 days of receiving the findings, submit a remedial action plan to the Minister respecting the petroleum hydrocarbons identified in the environmental site assessment.

- (2) A remedial action plan submitted under subsection (1) shall include
- (a) a description of the remedial or site management action to be taken;
 - (b) a summary of the rationale used to develop remedial or site management actions;
 - (c) a description of the monitoring plan for the site;
 - (d) a schedule of milestones to be reached under the proposed remedial action plan; and
 - (e) a target completion date.

(3) The Minister may, in respect of a remedial action plan submitted under subsection (1) or 10(2)

- (a) accept the plan if the Minister is satisfied with the descriptions, summary, schedule and target completion date of the remedial action plan; or
- (b) reject the remedial action plan if
 - (i) the Minister disagrees with any part of the remedial action plan, or

(ii) the Minister believes that the remedial action plan as submitted would not achieve satisfactory remediation of the site.

Written notice	<p>(4) The Minister, within four weeks of receiving the documents required to be submitted under subsection (2), (5) or 10(2), shall provide a written notice to the responsible party indicating that the Minister</p> <ul style="list-style-type: none"> (a) accepts the remedial action plan or modified remedial action plan, as the case may be, for the site; or (b) rejects the remedial action plan as submitted and requires the responsible party to modify the remedial action plan as set out in the notice.
Modified remedial action plan	<p>(5) A responsible party that receives a notice under clause (4)(b) shall, within 30 days of receipt of the notice, submit a modified remedial action plan to the Minister.</p>
Conditions	<p>(6) The Minister may, in accepting a remedial action plan submitted under subsection (3) or a modified remedial action plan submitted under subsection (5), place such conditions on the plan as the Minister considers necessary, including</p> <ul style="list-style-type: none"> (a) halting the cleanup under such circumstances as may be specified; or (b) requiring the mitigation of any adverse consequences of remedial or cleanup action at the site.
Extend target completion date	<p>(7) The Minister, upon the written request of the responsible party, may extend the target completion date as accepted in the remedial action plan or modified remedial action plan if the Minister is satisfied that there is a good reason for the extension.</p>
No implementation without acceptance	<p>(8) No person shall implement a remedial action plan without the Minister's prior acceptance of that plan except as provided in subsection 10(3). (EC655/06)</p>
Implementation	<p>10. (1) A responsible party shall implement a remedial action plan accepted by the Minister under subsections 9(4) or (5), as set out in the plan.</p>
If remedial work not effective	<p>(2) Where</p> <ul style="list-style-type: none"> (a) a responsible party has received the findings of a site professional who has conducted an environmental site assessment for the responsible party in accordance with section 7; and (b) the findings indicate that the levels of petroleum hydrocarbons from the soil or groundwater samples are greater than <ul style="list-style-type: none"> (i) the site specific target levels, or (ii) the applicable concentration levels in the lookup tables where there are no site specific target levels,

the responsible party shall, within 60 days of receiving the findings, submit a remedial action plan to the Minister respecting the petroleum hydrocarbons identified in the environmental site assessment.

(3) A responsible party may begin the cleanup of soil and groundwater before a remedial action plan is accepted by the Minister if the responsible party

Beginning cleanup
of soil and
groundwater

- (a) is of the opinion that immediate action is required to prevent further injury to the environment;
- (b) notifies the Minister of the intention to begin cleanup;
- (c) incorporates the cleanup measures in the remedial action plan to be submitted to the Minister for acceptance; and
- (d) obtains any necessary authorization from the Minister prior to discharging any waste to the environment. (EC655/06)

11. Where a responsible party has completed an accepted remedial action plan for a site, the Minister may direct the responsible party to monitor the soil, vapours, groundwater, or surface water at the site for the purpose of verifying the effectiveness of the remedial action taken in accordance with the accepted remedial action plan. (EC655/06)

Monitor
effectiveness of
remedial actions

12.(1) Upon the completion of a remedial action plan, the site professional supervising the remedial action plan shall submit a closure report and a record of site condition under the circumstances described in subsection 8(1).

Completion of
remedial actions

(2) The Minister, within four weeks of receiving a closure report and record of site condition under subsection (1), shall provide a written notice to the responsible party

Minister's notice

- (a) indicating that the Minister accepts the closure report and record of site condition; or
- (b) indicating
 - (i) that the Minister is not satisfied that the site has been remediated, if
 - (A) the levels of petroleum hydrocarbons in the soil and groundwater samples exceed the acceptable concentration levels of the lookup tables or the site specific target levels, or
 - (B) in the Minister's opinion the remediation procedure or comparison of soil and groundwater samples was deficient, and
 - (ii) the manner in which the site is to be dealt with under subsection (3).

(3) A responsible party who receives a written notice under clause (2)(b) shall, as directed by the Minister and in accordance with the regulations,

Further remedial
activity

- (a) resume remedial action at the site until the Minister is satisfied that the levels of petroleum hydrocarbons are equal to or less than

the acceptable concentration levels or the site specific target levels;
 or
 (b) cause an environmental site assessment to be completed by a site professional in accordance with section 7 within the time specified by the Minister. (EC655/06)

Voluntary remediation agreement	13. (1) The Minister may, on the application of a responsible party, enter into a voluntary remediation agreement with the responsible party respecting a site for the purpose of addressing and remediating petroleum hydrocarbon impacts in the environmental media related to the site.
Application in Form 1	(2) An application for a voluntary remediation agreement under subsection (1) shall be in Form 1 of Schedule E.
Form of agreement	(3) A voluntary remediation agreement shall (a) be in Form 2 of Schedule E; and (b) contain a remedial action plan accepted by the Minister.
May be multiple applicants	(4) The Minister may enter into a voluntary remediation agreement with multiple responsible parties if one of the responsible parties is designated to serve as the contact person for the Minister.
May be individual or multiple sites	(5) The Minister may enter into a voluntary remediation agreement on (a) an individual site basis, or (b) a multiple site basis where the responsible party is the same on the multiple sites and the remediation strategies and timelines are common to the multiple sites.
Rejection of agreement	(6) The Minister may reject a voluntary remediation agreement application submitted pursuant to subsection (2) where (a) a responsible party has not complied with remediation requirements at another site; or (b) in the case of multiple responsible parties, a contact person has not been designated under subsection (4).
Amending agreement	(7) The Minister may, upon the written request of a responsible party amend a voluntary remediation agreement for the purpose of extending the target completion date if the Minister is satisfied with the reason given for the change of date. (EC655/06)
Terminate voluntary remediation agreement	14. (1) The Minister may, subject to subsection (2), terminate a voluntary remediation agreement with the responsible party if, (a) there is a change in ownership of the site subject to the agreement; or (b) the Minister is satisfied that the responsible party is not in compliance with the voluntary remediation agreement.

(2) The Minister, or a responsible party, shall, before terminating a voluntary remediation agreement, give 30 days written notice of termination.

Termination of agreement

(3) Where a voluntary remediation agreement with multiple responsible parties is in effect and one or more of the responsible parties fails to comply with these regulations or with the provisions of the agreement, the Minister may terminate the agreement with respect to the responsible parties who fail to comply, and the agreement may remain valid for the other responsible parties.

Non-compliant responsible parties

(4) If the responsible party who fails to comply is also the contact person for the agreement, the Minister may terminate the entire agreement. (EC655/06)

Contact person fails to comply

15. A person who complies with a voluntary remediation agreement is not relieved from any obligation to comply with other applicable laws or regulations. (EC655/06)

Other laws apply

16. The Minister shall not initiate an enforcement action against any person in respect of the petroleum hydrocarbons on a site that is

Enforcement waived during agreement

(a) the subject of a voluntary remediation agreement; and

(b) in the process of remediation in compliance with such agreement.

(EC655/06)

SCHEDULE A
Lookup Tables

TABLE 1: Tier I Risk-Based Concentration Level Table: Soil (mg/kg)

Receptor	Ground-water use	Soil type	Petroleum Hydrocarbons						
			Benzene	Toluene	Ethyl Benzene	Xylenes	Modified *TPH		
							Gas	Diesel #2	#6 Oil
Residential	Potable	Coarse-grained	0.03	0.38	0.08	11	39	140	690
		Fine-grained	0.01	0.08	0.02	2.3	140	220	970
Commercial	Non-Potable	Coarse-grained	0.16	14	58	17	39	140	690
		Fine-grained	1.5	120	430	160	330	4,400	8,300
	Potable	Coarse-grained	0.03	0.38	0.08	11	450	7,400	10,000
		Fine-grained	0.01	0.08	0.02	2.3	520	840	4,700
	Non-Potable	Coarse-grained	1.8	160	430	200	450	7,400	10,000
		Fine-grained	11	680	430	650	10,000	7,700	10,000

*TPH = total petroleum hydrocarbons
(EC655/06)

TABLE 2: Tier I Risk-Based Concentration Level Table: Groundwater (mg/L)

Receptor	Ground-water use	Soil type	Petroleum Hydrocarbons						
			Benzene	Toluene	Ethyl Benzene	Xylenes	Modified *TPH		
							Gas	Diesel #2	#6 Oil
Residential	Potable	Coarse-grained	0.005	0.024	0.0024	0.3	4.4	3.2	7.8
		Fine-grained	0.005	0.024	0.0024	0.3	4.4	3.2	7.8
	Non-Potable	Coarse-grained	1	20	20	20	12	20	20
		Fine-grained	8.9	20	20	20	20	20	20
Commercial	Potable	Coarse-grained	0.005	0.024	0.0024	0.3	19	15	20
		Fine-grained	0.005	0.024	0.0024	0.3	19	15	20
	Non-Potable	Coarse-grained	6.9	20	20	20	20	20	20
		Fine-grained	20	20	20	20	20	20	20

*TPH = total petroleum hydrocarbons
(EC655/06)

TABLE 3: Tier II Pathway-Specific Concentration Level Table: Soil (mg/kg)

Receptor	Ground-water use	Soil Type	Exposure Pathway	Petroleum Hydrocarbons						
				Benzene	Toluene	Ethyl Benzene	Xylenes	Modified *TPH		
								Gas	Diesel #2	#6 Oil
Residential	Potable	Coarse-grained	Indoor Air	0.16	14	58	17	39	140	690
			**Soil Ingestion	390	12,000	7,000	120,000	8,900	5,300	8,300
			Soil Leaching	0.031	0.38	0.083	11	680	1,100	8,300
		Fine-grained	Indoor Air	1.5	120	>430	160	330	4,400	>10,000
			Soil Ingestion	390	12,000	7,000	120,000	8,900	5,300	8,300
			Soil Leaching	0.0071	0.082	0.018	2.3	140	220	970
	Non-Potable	Coarse-grained	Indoor Air	0.16	14	58	17	39	140	690
			Soil Ingestion	390	12,000	7,000	120,000	8,900	5,300	8,300
			Soil Leaching	Not applicable for non-potable scenarios						
		Fine-grained	Indoor Air	1.5	120	>430	160	330	4,400	>10,000
			Soil Ingestion	390	12,000	7,000	120,000	8,900	5,300	8,300
			Soil Leaching	Not applicable for non-potable scenarios						
Commercial	Potable	Coarse-grained	Indoor Air	1.8	160	>430	200	450	7,400	>10,000
			Soil Ingestion	570	18,000	10,000	180,000	13,000	7,700	12,000
			Soil Ingestion	0.031	0.38	0.083	11	2,500	11,000	>10,000
		Fine-grained	Indoor Air	11	>680	>430	>650	>10,000	>10,000	>10,000
			Soil Ingestion	570	18,000	10,000	180,000	13,000	7,700	12,000
			Soil Leaching	0.0071	0.082	0.018	2.3	520	840	4,700
	Non-Potable	Coarse-grained	Indoor Air	1.8	160	>430	200	450	7,400	>10,000
			Soil Ingestion	570	18,000	10,000	180,000	13,000	7,700	12,000
			Soil Leaching	Not applicable for non-potable scenarios						
		Fine-grained	Indoor Air	11	>680	>430	>650	>10,000	>10,000	>10,000
			Soil Ingestion	570	18,000	10,000	180,000	13,000	7,700	12,000
			Soil Leaching	Not applicable for non-potable scenarios						

*TPH = total petroleum hydrocarbons

**Soil ingestion includes dermal contact but not the inhalation of soil particulate exposure pathway.

(EC655/06)

TABLE 4: Tier II Pathway-Specific Concentration Level Table: Groundwater (mg/L)

Receptor	Ground-water use	Soil type	Exposure pathway	Petroleum Hydrocarbons						
				Benzene	Toluene	Ethyl Benzene	Xylenes	Modified *TPH		
								Gas	Diesel #2	#6 Oil
Residential	Potable	Coarse-grained	Indoor Air	1	40	90	23	12	100	890
			Ingestion	0.005	0.024	0.0024	0.3	4.4	3.2	7.8
		Fine-grained	Indoor Air	8.9	340	>150	200	>20	>20	>20
			Ingestion	0.005	0.024	0.0024	0.3	4.4	3.2	7.8
	Non-potable	Coarse-grained	Indoor Air	1	40	90	23	12	100	890
			Ingestion	Not applicable for non-potable scenarios						
Fine-grained		Indoor Air	8.9	340	>150	200	>20	>20	>20	
		Ingestion	Not applicable for non-potable scenarios							
Commercial	Potable	Coarse-grained	Indoor Air	6.9	260	>150	140	690	6,000	>20
			Ingestion	0.005	0.024	0.0024	0.3	19	15	73
		Fine-grained	Indoor Air	48	>520	>150	>220	>20	>20	>20
			Ingestion	0.005	0.024	0.0024	0.3	19	15	73
	Non-potable	Coarse-grained	Indoor Air	6.9	260	>150	140	690	6,000	>20
			Ingestion	Not applicable for non-potable scenarios						
Fine-grained		Indoor Air	48	>520	>150	>220	>20	>20	>20	
		Ingestion	Not applicable for non-potable scenarios							

*TPH = total petroleum hydrocarbons
(EC655/06)

SCHEDULE B
Reference Documentation for Limited Remedial Action

1.0 Soil Sample Testing Requirements for Site Evaluation

1.1 Once soil removal from the site is complete, representative soil samples shall be taken ensuring that the mixing of samples from different excavation sidewalls and base does not occur. Representative soil samples shall be collected from all walls and the floor of the excavation.

1.2 Where the petroleum hydrocarbons have reached bedrock, a base sample of the overburden soils shall be collected at the bedrock/overburden soil interface in the remedial excavation.

1.3 Any anomalous soils shall be identified and sampled.

1.4 Sampling protocols, consistent with current industry standards, shall be adhered to.

1.5 Soils shall be analyzed at a Canadian Association of Environmental Analytical Laboratories certified lab.

1.6 Soils shall be analyzed for Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) and Total Petroleum Hydrocarbons (TPH) according to Atlantic PIRI Tier I or II analytical methods where there is concern about the presence of petroleum hydrocarbons. Any other chemicals of concern shall be analyzed by a method acceptable to the Minister.

2.0 Reporting Requirements for Limited Remedial Action Closure Report

2.1 A closure report shall contain the following information:

A. Site Plan

A site plan shall include the following:

- (a) a plan drawn to scale;
- (b) the location of property boundaries;
- (c) property identification numbers for the site and all other properties shown on the plan;
- (d) the locations of human and ecological receptors (i.e., buildings, wells, watercourses, etc.) on the site and adjacent properties;
- (e) the locations of preferential pathways (i.e., drains, underground lines, etc.);
- (f) the limits of soil excavation;
- (g) all soil sampling locations;
- (h) all soil sample results for BTEX, and TPH; and
- (i) the delineation of petroleum hydrocarbon concentrations to applicable concentration levels in the lookup tables.

B. Site Description

A description of the site shall be provided which includes the following:

- (a) the identification of land use activities;
- (b) a description of the water supply on the site and adjacent properties; and
- (c) the identification of soil types, strata, and depth on the site.

C. Field Procedures

The following field procedure descriptions shall be included:

- (a) remedial action on the site;
- (b) all sampling protocols; and
- (c) the disposal method for excavated soils.

D. Analytical results

Lab certificates for all soil samples shall be included.

3.0 Comparison Criteria for Limited Remedial Action

3.1 The following criteria shall be used when comparing soil samples to the Tier I or Tier II lookup table values or the site specific target levels (SSTLs) derived from the RBCA computer model to determine if soil samples are greater or less than the concentrations shown in the applicable lookup tables :

A. Cleanup Criteria Land Use Selection Consideration

When making a determination of land use for the applicable concentration levels in the lookup tables, the site professional shall take into account current and reasonable potential future land use based on the following factors:

- (a) current and proposed zoning for the site;
- (b) land use and planning policies of the government or the municipality in which the site and adjacent sites are situated;
- (c) current site activities; and
- (d) proposed site activities.

B. Cleanup Criteria Groundwater Use Selection Consideration

When making a determination whether the water at the site is potable or non-potable for the applicable concentration levels in the lookup tables, the site professional shall take into account the following factors:

- (a) current and proposed uses for groundwater on the site;
- (b) current and proposed groundwater uses of adjacent properties;
- (c) the potential for groundwater to pollute potable groundwater;
- (d) evidence of the degradation of local groundwater quality to a non-potable state; and
- (e) whether analytical testing of the local background groundwater quality indicates past human activities have caused degradation of groundwater quality to a non-potable state.

C. Cleanup Criteria Selection Consideration

The following are mandatory criteria that must be satisfied before applying the Tier I and Tier II lookup table values:

- (a) non-aqueous phase liquids shall not be present in groundwater;
- (b) potable drinking water shall be free of any objectionable taste and odour;
- (c) soils shall not contain any liquid or free petroleum hydrocarbons;
- (d) residual petroleum hydrocarbons shall not create objectionable odours or explosive conditions in indoor or outdoor air;
- (e) surface soils shall not be stained; and
- (f) the site characteristics and exposure scenarios shall be compatible with the RBCA default values specified in the current RBCA User Guidance document.

(EC655/06)

Part 3: Tier I, Tier II and Site Specific Target Levels - Environmental Site Criteria

Petroleum hydrocarbons (e.g. gasoline, lead, waste oil, etc.) that have been identified as originating from the site:

Gasoline #2 Diesel #6 Oil
Other (Specify): _____

Current land use:

Residential Commercial
Other (Specify): _____

Drinking water use:

On-site potable water Within a wellfield protected area
Non-potable water

Impacted Soil composition:

Coarse-grained Fine-grained
Bedrock (Specify): _____

Analysis Type:

Tier I
Tier II
Site Specific Target Level Criteria
Other (Specify): _____

Description of methodology (Investigative and Remedial Options):

Limited Remedial Action Environmental Site Assessment

Part 4: Corrective Actions

Describe the remedial objectives and the basic corrective actions of the Limited Remedial Action or the Remedial Action Plan employed for the site.

Describe the current use of the site (buildings, operations, etc.).

<p>Based on the work completed, the site (cited in Part 1) is suitable for the following current or reasonably foreseeable future site activity.</p> <p style="text-align: center;">Residential Commercial</p> <p>If site closure is conditional, list site specific engineered or institutional controls that apply to the site together with a description of the objectives of each control.</p>	
<p>Part 5: Summary Statement of Site Professional</p>	
<p>The signature of the site professional on this form indicates the fulfilment of the checked statements.</p> <p>Please check appropriate statements (statements 1, 2 and 6 are mandatory):</p> <p><input type="checkbox"/> 1. All work on which this record of site condition is based was prepared, overseen or reviewed by the site professional.</p> <p><input type="checkbox"/> 2. The site was assessed or remediated in accordance with Prince Edward Island's Petroleum Hydrocarbon Remediation Regulations.</p> <p><input type="checkbox"/> 3. Based on the results of the limited remedial action or environmental site assessment, the applicable Tier I, Tier II or site specific target level criteria were not exceeded on the site and therefore, remedial action or site specific engineered or institutional controls are not required for the current or reasonably foreseeable future site activities.</p> <p><input type="checkbox"/> 4. The site has been remediated to a acceptable levels of petroleum hydrocarbons for the current or reasonably foreseeable future site activities (as cited in Part 4) and <i>unconditional closure</i> is recommended.</p> <p><input type="checkbox"/> 5. The site requires site specific engineered or institutional controls to satisfy the current or reasonably foreseeable future site activities (as cited in Part 4) and <i>conditional closure</i> is recommended.</p> <p><input type="checkbox"/> 6. This record of site condition form is identical to the one listed in the Petroleum Hydrocarbon Remediation Regulations or as provided by the PEI Department of Environment, Energy and Forestry and the form has not been altered, other than by filling in the blank spaces as appropriate.</p>	
<p>Company: _____</p>	Professional Seal Here
<p>Contact Name: _____</p>	
<p>Address: _____</p>	
<p>Date: _____ Signature: _____</p>	

(EC655/06)

SCHEDULE D
REFERENCE DOCUMENTATION FOR ENVIRONMENTAL SITE
ASSESSMENTS

1.0 Comparison Criteria for Environmental Site Assessment

The following criteria shall be used when comparing confirmatory soil samples with the Tier I or Tier II lookup table values or the site specific target levels derived from the RBCA computer model to determine if soil samples are greater or less than the concentrations shown in the applicable concentration levels in the lookup tables:

1.1 Cleanup Criteria Land Use Selection Consideration

When making a determination of land use for the applicable concentration levels in the lookup tables, the site professional shall take into account current and reasonable potential future land use based on the following factors:

- (a) current and proposed zoning for the site;
- (b) land use and planning policies of the government or the municipality in which the site and adjacent properties are situated;
- (c) current site activities; and
- (d) proposed site activities.

1.2 Cleanup Criteria Groundwater Use Selection Consideration

When making a determination whether the site is potable or non-potable for the applicable levels in the lookup tables, the site professional shall take into account the following factors:

- (a) current and proposed uses for groundwater on the site;
- (b) current and proposed groundwater uses of adjacent properties;
- (c) the potential for groundwater to pollute potable groundwater;
- (d) evidence of the degradation of local groundwater quality to a non-potable state; and
- (e) whether analytical testing of the local background groundwater quality indicates past human activities have caused degradation of groundwater quality to a non-potable state.

1.3 Cleanup Criteria Selection Consideration

The following are mandatory criteria that must be satisfied before applying the Tier I and Tier II lookup table values:

- (a) non-aqueous phase liquids are not present in groundwater;
- (b) potable drinking water are free of objectionable taste and odour;
- (c) soils do not contain liquid or free petroleum hydrocarbons;
- (d) residual petroleum hydrocarbons do not create objectionable odours or explosive conditions in indoor or outdoor air;
- (e) surface soils are not stained; and
- (f) the site characteristics and exposure scenarios are compatible with the RBCA default values specified in the current RBCA User Guidance document. (EC655/06)

SCHEDULE E**Form 1****Voluntary Remediation Application**

Section 12 of the Petroleum Hydrocarbon Remediation Regulations made under the *Environmental Protection Act* R.S.P.E.I. 1988, Cap. E-9, allows the Minister and a Responsible Party to enter into a voluntary remediation agreement.

Personal information on this form is collected under subsection 12(2) of the *Environmental Protection Act* R.S.P.E.I. 1988, Cap. E-9 Petroleum Hydrocarbon Remediation Regulations as it relates directly to and is necessary for an application to enter into a voluntary remediation agreement. If you have any questions about this collection of personal information, you may contact the Director of Pollution Prevention Division, 11 Kent Street, Jones Building, Charlottetown, PEI C1A 7N8, Phone: (902) 368-5474.

SECTION 1 - Applicant Contact Information	
Name of Applicant:	
Mailing Address:	
Phone:	Fax:
Email:	
Property Identification Number of Site (PID):	
Location and Address of Site:	
Current Owner:	
Previous Owners in Last 10 Years:	
Land Use History:	
Current Land Use:	
Foreseeable Future Land Use:	

SECTION 2 – Multiple Sites (complete if the proposed Voluntary Remediation Agreement is to include more than one site)	
Contact Person (responsible party to serve as contact person for the Minister):	
Property #1	
PID: _____	Location: _____
Address: _____	
Property #2	
PID: _____	Location: _____
Address: _____	
Property #3	
PID: _____	Location: _____
Address: _____	

Property #4 PID: _____ Location: _____ Address: _____
Property #5 PID: _____ Location: _____ Address: _____

SECTION 3 – Remedial Action Plan

All applications must include, for acceptance by the Minister, a Remedial Action Plan for the site or sites to be included in the Voluntary Remediation Agreement. The Remedial Action Plan must include the following:

- (a) a description of the corrective actions to be taken;
- (b) a summary of the rationale used to develop remedial or site management actions;
- (c) a description of the monitoring plan; and
- (d) a schedule of milestones for compliance with the proposed remedial action plan.

SECTION 4 – Declaration of Ability and Intent (all applicants must complete)

I hereby declare that:

1. I am [initial one]
 - (a) the applicant and I acknowledge that this document is legally binding on me; or
 - (b) the agent of the applicant and I am fully authorized to make this declaration on behalf of the applicant and to acknowledge that this document is legally binding on the applicant.
2. I have personally examined and am familiar with sections 13 to 17 of the Petroleum Hydrocarbon Remediation Regulations made under the *Environmental Protection Act*.
3. I will employ a site professional with the required knowledge and experience to perform the proposed remedial work described in the remedial action plan.
4. I will notify the Department upon becoming aware of any inability to proceed with the proposed voluntary remediation actions.

Date

Signature of Applicant/Agent

on behalf of

Company Name

Please forward application to:

Department of Environment, Energy & Forestry
Pollution Prevention Division, Field Supervisor
PO Box 2000, 11 Kent Street
Charlottetown, PE C1A 7N8
Fax: (902) 368-5830
(EC655/06)

Form 2

THIS AGREEMENT made this ----- day of -----, 20--

BETWEEN

The Government of Prince Edward Island, as represented by
the Minister of Environment, Energy and Forestry
(hereinafter called the "Minister")

AND

(hereinafter called the "Responsible Party")

Voluntary Remediation Agreement

(pursuant to section 12 of the Petroleum Hydrocarbon Remediation Regulations)

WHEREAS section 12 of the regulations authorizes the Minister of Environment, Energy and Forestry to enter into a Voluntary Remediation Agreement respecting a site for the purpose remediating petroleum hydrocarbon impacts in the environment related to the site;

AND WHEREAS the Responsible Party has applied to enter into a Voluntary Remediation Agreement with the Minister pursuant to subsection 13(1) of the regulations;

AND WHEREAS the Responsible Party will undertake the remediation, in accordance with the regulations and this agreement, of one or more sites that contain petroleum hydrocarbons;

NOW THEREFORE in consideration of these premises and the mutual covenants and agreements herein contained, the parties hereto agree as follows:

Definitions

1. In this Agreement, the following definitions apply:

(a) "Responsible Party" means

- (i) the owner of a storage tank system,
- (ii) the person with the care and control of a storage tank system,
- (iii) the owner of the site on which a storage tank system is located, or
- (iv) a person acting on behalf of any person described in subclauses (i) to (iii);

(b) "regulations" means the Petroleum Hydrocarbon Remediation Regulations made under the *Environmental Protection Act*;

(c) "site" means a site on which a petroleum hydrocarbons are present, whether or not there is a petroleum storage tank system on the site.

Covenants of the Responsible Party

2. The Responsible Party shall

- (a) undertake the remediation of all sites referred to in the application in accordance with
 - (i) the application which is incorporated as part of this Agreement, and
 - (ii) the regulations;

(b) determine the clean-up criteria for the sites referred to in this Agreement using the current version of the risk based corrective action model;

(c) complete the site remediation in accordance with the Remedial Action Plan submitted with the application and accepted by the Minister by the following dates:

(d) upon completion of the Remedial Action Plan, submit to the Minister for acceptance a record of site condition and a closure report by the following date:

(e) accept the sole responsibility for compliance with all Federal, Provincial and Municipal laws, regulations and bylaws that may have application to the work being performed under this Agreement.

Covenants of the Minister

3. The Minister:

(a) subject to paragraph (b), shall not initiate an enforcement action, including an administrative or judicial action against a Responsible Party in respect of the petroleum hydrocarbons on a site that is the subject of a voluntary remediation agreement and in the process of remediation in compliance with such agreement;

(b) may take any enforcement action it deems necessary if this Agreement is terminated or rescinded, or if the Responsible Party does not successfully implement the Agreement within the targeted time frames established in paragraph 2(c); and

(c) shall, pursuant to subsection 9(3) of the regulations, provide a written notice to the Responsible Party within four weeks of receiving a closure report and record of site condition indicating the acceptance or rejection of the closure report and record of site condition.

Termination of Agreement

4. This Agreement may be terminated on 30 days written notice to the other party

(a) by the Minister under subsection 14(1) of the regulations if

- (i) the ownership of a site referred to in this agreement has changed,
- (ii) a Responsible Party is not in compliance with, or is in violation of, any of the terms of this Agreement; or

(b) by the Responsible Party under subsection 14(2) of the regulations.

Freedom of Information and Protection of Privacy Act

5. The parties agree that any information that may be contained in this Agreement may be subject to release under the *Freedom of Information and Protection of Privacy Act*. The Minister will consult with the Responsible Party prior to release of any information.

Indemnification

6. The Responsible Party shall indemnify and hold harmless the Minister, the Government, its agents, representatives and employees from and against all claims, demands, losses, costs, damages, actions, suits or proceedings of every nature and kind whatsoever arising out of or resulting from the performance of work, provided that any such claim is caused in whole or in part by any act, error or omission, including, but not limited to, those of

