

Upstream Oil and Gas Site Classification Tool

April 2019

1.0 Definitions

If a definition in this site classification tool is different from a definition in the *Environmental management Act* or Contaminated Sites Regulation or Ministry Procedure or Protocol, the Ministry approved definition takes precedence.

“**Act**” means the *Environmental Management Act*, S.B.C. 2003, c. 53.

“**aquatic habitat**” means habitat defined in a protocol approved by the Director or as used by “aquatic life” as defined in the Regulation.

“**Commission**” means the Oil and Gas Commission.

“**certificate of restoration**” means a certificate issued by the commission under section 41.

“**contaminant**” means a substance causing contamination as defined in Part 4 of the Act.

“**Director**” means an individual employed by the government and designated in writing by the minister as a Director of Waste Management or as an acting, deputy or assistant Director of Waste Management [under the Act].

“**dense nonaqueous phase liquid**” (DNAPL) means a nonaqueous phase liquid having a specific gravity greater than 1.0.

“**exposure zone**” means the zone in which humans or biota can come into direct contact with contaminants in the absence of measures to prevent exposure.

“**high risk site**” means a site determined to be a high risk site under a director’s protocol.

“**high water mark**” means:

- a) for freshwater, means the visible high water mark of a stream where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark on the soil of the bed of the stream a character distinct from that of its banks, in vegetation, as well as in the nature of the soil itself, and includes the active floodplain; and
- b) for marine water, a high water mark as defined by the Higher High Water Mean Tide by Fisheries and Oceans Canada and as mapped on Canadian Hydrographic Services navigational charts.

“**light nonaqueous phase liquid**” (LNAPL) means a nonaqueous phase liquid having a specific gravity less than 1.0.

“Manager” means an officer of the Commission delegated authority under section 41 of the *Oil and Gas Activities Act*.

“Ministry” means the Ministry of Environment & Climate Change Strategy.

“mobile DNAPL” means DNAPL that has moved in geologic media under prevailing site conditions (e.g. hydraulic gradients, geologic conditions). DNAPL is considered mobile when:

- a) DNAPL is present in fractured bedrock;
- a) DNAPL is present over an area greater than 10m² on the land surface area;
- b) temporal sampling indicates advancement of DNAPL across a monitoring well network;
- c) free liquid is found in monitoring wells at an apparent thickness greater than 2 mm; or
- d) individual DNAPL substances are detected in water at concentrations exceeding 10% of their theoretical solubility limit.

“mobile LNAPL” means LNAPL has moved in geologic media under prevailing site conditions (e.g. hydraulic gradients, geologic conditions). LNAPL is considered mobile when:

- b) LNAPL is present in fractured bedrock; or
- c) LNAPL is present over an area greater than 10m² on the land surface area;
- d) LNAPL is measured over an area greater than 50m² and at least one of the following applies:
 - 1. Seasonal water table fluctuations exceed 1 m (unless adequate seasonal data available to determine maximum LNAPL thickness);
 - 2. Hydraulic gradients exceed 0.01 m/m for soil compositions listed in Table 2;
 - 3. Preferential pathways intersect zones containing LNAPL and thicknesses exceed 0.3m; or
 - 4. LNAPL thickness exceed value indicated in Table 2.
- e) temporal sampling indicates increasing thickness of LNAPL in monitoring wells;
- f) temporal sampling indicates advancement of LNAPL across a monitoring well network; or
- g) LNAPL is measured in monitoring wells over an area greater than 50m² at thicknesses exceeding values indicated in Table 1 of this tool.

“offsite migration” means the migration of contaminants or other substances from a source parcel to a neighbouring parcel (an affected parcel) and where the source parcel and neighbouring parcel have different ownership or tenure.

“operator” has the same meaning as in the Drilling and Production Regulation under the Petroleum and Natural Gas Act.

“receptor” means a living plant, animal or human that may be exposed to a substance.

“Regulation” means the Contaminated Sites Regulation (B.C. Reg. 375/96).

“**upper cap concentration**” means the concentration established in a protocol approved by the director of a substance with a numerical standard in the Regulation and which, when present in the exposure zone, poses a high risk to environmental or human health.

2.0 Introduction

Pursuant to the memorandum of understanding between the Oil and Gas Commission (Commission), Ministry of Environment (MoE), Ministry of Agriculture and Lands, and Ministry of Energy and Mines, this document outlines the Site Classification Tool to be used as the administrative threshold to determine if a site requires Ministry of Environment oversight. Sites designated as “priority” using this tool are considered to be “high risk” sites and require MoE oversight until the site is classified as “not high risk” by the MoE.

This document sets simple, objective criteria for characterizing environmental and human health risks based on easily obtainable site information. These criteria have been developed in the context of the logistical challenges facing the oil and gas sector when assessing sites in remote locations. The Commission also recognizes that sites may not be fully delineated prior to using this tool. The Commission will allow for the inclusion of professional judgement into the data set when evaluating the environmental risk to a site.

Nonetheless any of the conclusions drawn from the use of this Site Classification Tool, provisions laid out in the *Environmental Management Act* allow the Director of the MoE to require that a site be overseen by the MoE if the Director thinks that there is a risk to human health or the environment.

The Site Classification Tool is a stand-alone tool created by the Commission for the classification of oil and gas sites only. The authority to use this tool and oversee the management of oil and gas sites is based on the provisions laid out in the *Oil and Gas Activities Act*, and a Memorandum of Understanding between the MoE and the Commission (2007).

The Site Classification Tool will allow for classification of sites such that the Commission will be able to process Certificate of Restoration applications and manage environmental liability at oil and gas sites for the benefit of public and the oil and gas industry.

3.0 Procedure

3.1 Site information needs

The level of information necessary to evaluate all the site indicators in this tool and reach a site classification for a site will vary on a site-by-site basis depending on the nature and extent of contamination, site geology and hydrogeology and site proximity to receptors. The basic level of information that is required to assess the site classification for the site and is provided in Appendix 3. All of the listed technical data should be available to provide to the Commission should it be required. Attestations that this data is available and has been collected following the procedures laid out herein must be included in the site classification report. The Commission will randomly request the submission of this data. Proponents will be asked to submit the background technical data, if deemed necessary, following a review of the submission.

Overall, ensure that the site classifications determined under this tool must be supported by appropriate, satisfactory site information obtained in accordance with relevant Commission and MoE procedures, protocols, guidance and standard professional practice.

3.2 Site classification

A site exceeding any threshold of this tool is classified as a “priority” site and will be considered by the Commission to constitute a “high risk” site until such time as the site is classified as “not high risk” by the Director of the MoE.

Site classifications for wells and facilities are based on industrial land use for all oil and gas sites unless there has been offsite migration of contamination onto a parcel of land that is currently zoned or otherwise designated for a future land use under an Official Community Plan. In such cases, the offsite contamination shall be classified based on the most protective land use of either the current or anticipated future potential land use as designated in the Official Community Plan. Site classifications for temporary disturbances associated with the drilling of the well such as remote sumps, borrow pits, and campsites that are no longer being used for operations shall be based on the anticipated current or future land use (i.e. current zoning, agricultural within the ALR, or wildland).

3.3 Derivation of Upper Cap Concentrations of Substances

The upper cap concentrations established in a protocol of a substance with a numerical standard in the Regulation and which, when present in the exposure zone, poses a high risk to environmental or human health. The ministry's upper cap concentrations are in [Protocol 11](#), "Upper Cap Concentrations for Substances Listed in the Contaminated Sites Regulation.

Upper cap concentrations were generally derived from the numerical environmental quality standards and criteria in Schedules 3.1, 3.2, 3.3 and 3.4 of the Contaminated Sites Regulation (CSR) by applying multiplication factors or "upper cap multipliers". Derivation details are in the following Table 1.

Table 1. Upper cap concentrations ¹

Media and Pathway	Contaminated Sites Regulation Standards/Criteria	Upper Cap Multiplier	Notes
Human Health Protection			
Soil exposure	Schedule 3.1 Part 1 Schedule 3.1 Part 2	10	2
Vapour exposure	Schedule 3.3	10 or TLV Agricultural, urban park, residential, commercial and parkade 100 or TLV Industrial	3
Water exposure	Schedule 3.2	1	4
Environmental Health Protection			
Invertebrate and plant soil exposure	Schedule 3.1 Part 1 Schedule 3.1 Part 2	10	2
Livestock ingesting soil and fodder exposure	Schedule 3.1 Part 1	10	6
Aquatic life sediment exposure	Schedule 3.4	10	7
Aquatic life water exposure	Schedule 3.2	10	4,5,8
Livestock water exposure	Schedule 3.2	1	4
Irrigation water exposure	Schedule 3.2	1	4

[Source – [Protocol 11](#): Upper Cap Concentrations for Substances Listed in the Regulation]

Notes:

1. Upper cap concentrations are calculated by multiplying the appropriate *Contaminated Sites Regulation Standard* by the appropriate *Upper Cap Multiplier* listed for each *Media* and *Pathway*.
2. Reference soil standards and upper cap concentrations are specific to land uses of the Regulation.
3. Reference vapour standards and upper cap concentrations are specific to vapour uses of the Regulation. TRV means the Threshold Limit Value of the WorkSafeBC 2017.
4. The application of groundwater standards for the protection of specific water uses is to be determined in accordance with [Protocol 21](#), “Water use Determination.”
5. The application of upper cap concentrations for the specified water exposure at a site is determined in accordance with [Technical Guidance 15](#), “Concentration Limits for the Protection of Aquatic Receiving Environments”.
6. Upper cap multiplier, reference soil standards and upper cap concentrations are specific to agricultural land use.
7. The application of upper cap concentrations for aquatic life sediment exposure at a site is determined in accordance with [Technical Guidance 19](#), “Assessing and Managing Contaminated Sediments”.
8. Current CSR Schedule 3.2 aquatic life standards for VPH_{w6-10} and EPH_{w10-19} effectively represent a 10-fold multiple of related respective CSR Schedule 3.2 aquatic life standards for VPH_w and LEPH_w. Consequently, an upper cap multiplier of 1 rather than 10 is used to derive VPH_{w6-10} and EPH_{w10-19} upper cap concentrations.

3.4 Priority Thresholds

Priority sites are not eligible for a Certificate of Restoration until the Director of the ministry has classified the site as “not high risk” and all of the requirements of the Certification of Restoration have been met. If any one or more of the following conditions occur at a site, it is considered to be “priority” site:

1. Mobile Non-aqueous Phase Liquids (LNAPL or DNAPL) are present at the site;

2. Substances within the top meter of soil exceed the upper cap (UC) concentrations for human intake of soil for the applicable land use, on an area >50 m² (PL, AL, RL use) or >125 m² (CL, IL use), unless all soil exceeding upper cap concentrations for human intake will be removed or remediated to below upper cap concentrations within 90 days from the submission of the risk classification to the Commission.
3. Drinking water standards apply to groundwater at the site and substances in groundwater either:
 - a. Exceed 10 times the upper cap concentrations for drinking water within 10 meters of a drinking water well; or
 - b. Exceed the upper cap concentrations for drinking water within the well;
4. Substances in surface water either:
 - a. Exceed 10 times the upper cap concentrations for drinking water within 100 meters upstream of a drinking water intake; or
 - b. Exceed the upper cap concentrations for drinking water at the intake;
5. Substances in groundwater within 10 meters of the *high water mark* of an aquatic habitat exceed the upper cap concentrations for aquatic life water use;
6. Livestock or Irrigation water standards apply to groundwater at the site and substances in groundwater either:
 - a. Exceed 10 times the applicable upper cap concentrations for water within 10 meters of a water supply well; or
 - b. Exceed the upper cap concentrations for water within the well;
7. Substances in surface water either:
 - a. Exceed 10 times the applicable upper cap concentrations for water within 100 meters upstream of a water supply intake; or
 - b. Exceed the applicable upper cap concentrations for water at the intake;
8. Substances within the top meter of soil exceed the upper cap concentrations for toxicity to invertebrates and plants unless either:
 - a. The area of UC contaminated soil is <100 m² (PL, AL, RL use) or <250 m² (CL, IL use); or 500 m² (WL use); or
 - b. All soil exceeding upper cap concentrations for toxicity to invertebrates and plants will be removed or remediated to below upper cap concentrations within 90 days; or
 - c. the operator can demonstrate to the satisfaction of the Commission that contamination at the site is contained in such a manner to prevent contaminant migration in soil, groundwater or surface water, and interim preventative measures (e.g. fencing, netting) have been implemented to prevent wildlife from ingesting contaminated soil; and the operator

provides a remediation schedule and interim monitoring plan that is acceptable to the Commission.

9. Volatile substances included in the BC Contaminated Sites Regulation Schedule 3.3 originating from the site have been detected in soil or groundwater within 30 meters of an existing building that is not part of the onsite oil and gas infrastructure; and within this distance, at least one substance in soil vapour exceeds the upper cap concentrations for human inhalation for the applicable land use.
10. Volatile substances included in the BC Contaminated Sites Regulation Schedule 3.3 have been detected in soil or groundwater and the site is on a parcel of land that is currently zoned or otherwise designated for future use as parkland, residential, or commercial property within an official community plan, and at least one substance in soil vapour exceeds the upper cap concentrations for human inhalation for the applicable land use.

4.0 Reporting requirements

4.1 Notification Triggers

Site classifications must be provided to the Manager whenever the operator makes any of the following submissions:

- Site investigation report required or ordered by the Manager;
- Site Classification Report required by the Manager;
- Notification of independent remediation under section 54 of the Act;
- Within 90 days of making a notification of offsite migration under section 57 or 60.1 of the Regulation. Exceptions to the timing of the reporting requirement will be considered on a site by site basis by the Commission, as the Commission recognizes that it may not be possible to immediately access a site to complete the necessary assessments required to complete the risk classification within 90 days of determining that offsite-migration has occurred at some difficult-to-access-sites; and
- Part 1 application for certificate of restoration if not previously submitted under one of the above triggers.

Site classification details are to be provided in the form of a Site Classification Report, in a format shown in Appendix 2.

All applications for Certificates of Restoration must explicitly state that the site is not a priority site as determined using this Site Classification Tool. A certificate of

restoration will not be issued for a site unless it has been classified using this Site Classification Tool and is not designated as a priority site, or has been classified by the Director as not being High Risk.

4.2 Reporting details

The Site Classification Report contains three parts:

Part 1: Land, owner and agent information

Part 2: Investigation and site status information

Part 3: Professional signatures

An example of the Site Classification Report is included in Appendix 2.

5.0 Priority site remediation and reclassification

Priority sites must be managed in accordance with the requirements of the Ministry and may be reclassified as low to moderate risk in accordance with Ministry process.

6.0 Process Improvement

The volume of information and knowledge related to the assessment of environmental impacts is constantly expanding. Accordingly, the Commission is committed to make appropriate changes on an ongoing basis to increase the effectiveness and efficiency of the processes and strategies and better manage environmental impacts. The Site Classification Tool may be revised from time to time to reflect the most recent regulatory amendments, definitions, guidance, processes, policies and protocols.

APPENDIX 1

LNAPL CHARACTERISTICS

Table 2. LNAPL thickness considered mobile as a function of soil composition

Soil Type	Characteristic fraction	Percent fines (silt and clay)	LNAPL Thickness (m)
Coarse Sand or Gravel	>20% Coarse Sand	< 3	0.03
Coarse Sand or Gravel	>20% Coarse Sand	3-10	0.05
Medium Sand	Medium Sand	< 10	0.1
Fine Sand	Fine Sand	<10	0.2
Silty Sand	Sand	>10	0.3

[Source - [Protocol 16](#): Determining the Presence and Mobility of Nonaqueous Phase Liquids and Odorous Substances]

Notes:

1. Scientific background information on methods and assumptions for determining the presence of mobile LNAPL is in the Protocol 16: Determining the Presence and Mobility of Nonaqueous Phase Liquids and Odorous Substances.
2. “Guidance on assessment of light nonaqueous phase liquid mobility for site classification purposes in British Columbia”, by Golder Associates Ltd.
3. Soil compositions are based on the Unified Soil Classification System.
4. Soil compositions falling outside listed soil types shall be assigned the soil type that most closely approximates the permeability characteristics of the soil. In the event of uncertainty, a coarser grained soil type shall be assigned. For soil types that are finer grained than silty sand, default to the parameters listed for silty sand.

APPENDIX 2

SITE CLASSIFICATION REPORT TEMPLATE



<p style="text-align: center;">Site Classification Form Physical Address: 6534 Airport Road, Fort St. John, B.C. Mailing Address: Bag 2, Fort St. John, B.C. V1J 2B0 Phone: (250) 794-5200</p>	Date Received
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FOR INSTRUCTIONS REFER TO THE OIL AND GAS ACTIVITY APPLICATION MANUAL
THIS IS AN AUDITABLE DOCUMENT

LAND DESCRIPTION				A
Site ID No. (if known):		PID:		or PIN:
Legal Description:		WA No. or Facility No.:		AD No.:
Latitude	Degrees:	Minutes:	Seconds:	
Longitude	Degrees:	Minutes:	Seconds:	
Site Address:				
SITE OWNER AND/OR OPERATOR				B
Name:				
Address:				
City:		Province/State:	Postal/Zip Code:	Country:
Phone No.:		Email:		
ENVIRONMENTAL CONSULTANT/CONTRACTOR/AGENT CONTACT				<input type="checkbox"/> NA C
Name:				
Address:				
City:		Province/State:	Postal/Zip Code:	Country:
Phone No.:		Email:		
Site Classification Reporting Trigger:		<input type="checkbox"/> Notification of Independent Remediation <input type="checkbox"/> Notification of Offsite Migration <input type="checkbox"/> Certificate of Restoration Application, Part 1 <input type="checkbox"/> Required by Manager		
SITE INVESTIGATION STATUS				D
Investigation Status				
1. Historical review of contamination sources completed? <input type="checkbox"/> Yes <input type="checkbox"/> No Scheduled Completion Date:				
2. Site investigation for presence of contamination completed? <input type="checkbox"/> Yes <input type="checkbox"/> No Scheduled Completion Date:				
3. Delineation of contamination completed? <input type="checkbox"/> Yes <input type="checkbox"/> No Scheduled Completion Date:				
4. Offsite migration of contamination identified? <input type="checkbox"/> Yes <input type="checkbox"/> No Scheduled Completion Date:				
Priority Site Assessment				
1. Are mobile non-aqueous phase liquids (LNAPL or DNAPL) present at the site? <input type="checkbox"/> Yes <input type="checkbox"/> No				
2. Do substances within the top metre of soil exceed the upper cap concentrations for human intake of soil for the applicable land use? <input type="checkbox"/> Yes <input type="checkbox"/> No a. Will this soil be removed from the site or remediated within 90 days? <input type="checkbox"/> Yes <input type="checkbox"/> No				
3. Do drinking water standards apply to groundwater at the site? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, does a substance in groundwater: a. Exceed 10 times the upper cap concentrations for drinking water within 10 metres of a drinking water well? <input type="checkbox"/> Yes <input type="checkbox"/> No b. Exceed the upper cap concentrations for drinking water within the well? <input type="checkbox"/> Yes <input type="checkbox"/> No				

4. Substances in surface water: a. Exceed 10 times the upper cap concentrations for drinking water within 100 metres upstream of a drinking water intake? <input type="checkbox"/> Yes <input type="checkbox"/> No b. Exceed the upper cap concentrations for drinking water at the intake? <input type="checkbox"/> Yes <input type="checkbox"/> No
5. Do substances in groundwater within 10 metres of the <i>high water mark</i> of an aquatic habitat exceed the upper cap concentrations for aquatic life water use? <input type="checkbox"/> Yes <input type="checkbox"/> No
6. Do livestock or irrigation water standards apply to groundwater at the site? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, does a substance in groundwater: a. Exceed 10 times the applicable upper cap concentrations for water within 10 metres of a water supply well? <input type="checkbox"/> Yes <input type="checkbox"/> No b. Exceed the upper cap concentrations for drinking water within the well? <input type="checkbox"/> Yes <input type="checkbox"/> No
7. Do substances in surface water: a. Exceed 10 times the applicable upper cap concentrations for water within 100 metres upstream of a water supply intake? <input type="checkbox"/> Yes <input type="checkbox"/> No b. Exceed the applicable upper cap concentrations for water at the intake? <input type="checkbox"/> Yes <input type="checkbox"/> No
8. Have volatile and toxic substances originating from the site been detected in soil or groundwater within 30 metres of an existing building that is not part of the onsite oil and gas infrastructure? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, does a substance in soil vapour: a. Exceed the upper cap concentrations for human inhalation for the applicable land use within 30 metres of a building? <input type="checkbox"/> Yes <input type="checkbox"/> No
9. Is the site zoned or otherwise designated within an Official Community Plan as parkland, residential or commercial use and at least one substance exceeds the upper cap concentrations for human inhalation for the applicable land use? <input type="checkbox"/> Yes <input type="checkbox"/> No
10. Do substances within the top metre of soil exceed the upper cap concentrations for toxicity to invertebrates and plants? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, will: a. All soil exceeding upper cap concentrations for toxicity to invertebrates and plants be removed or remediated to below upper cap concentrations within 90 days? <input type="checkbox"/> Yes <input type="checkbox"/> No b. The contamination at the site is contained in a manner that will prevent migration into soil, groundwater or surface water and interim preventative measures (e.g. fencing, netting) have been implemented to prevent wildlife from ingesting contaminated soil? <input type="checkbox"/> Yes <input type="checkbox"/> No Note: If the answer to 10(b) is YES, then attach a description of the site and any preventative measures taken to ensure that the contamination will not migrate within soil, groundwater and surface water; a remediation schedule and interim monitoring plan for the site; as well as supporting site investigation information for Commission review.
This site is classified as: <input type="checkbox"/> Priority site <input type="checkbox"/> Not a priority site <input type="checkbox"/> Not a priority site because immediate short-term remediation is being undertaken [Answered YES to Question 2(a) or 10(a)] <input type="checkbox"/> Requires Commission decision [Answered YES to Question 10(b)]

COMMISSION USE ONLY		E
Based on the known information, the Commission has classified this site as: <input type="checkbox"/> Priority site <input type="checkbox"/> Not a priority site		
_____ Signature	_____ Date	
PROFESSIONAL SIGNATURES		F
I confirm that the investigations referred to above have been conducted in accordance with approved procedures and guidance and standard professional practice. I confirm the above information to be true, based on current knowledge as of the date completed. Where data gaps may exist in the information that this classification is based upon, I have used my professional judgement. I confirm that I have demonstrable experience in conducting investigations of the type reviewed above.		
_____ PRINT NAME	_____ SIGNATURE & PROFESSIONAL SEAL	_____ DATE (YYYY/MM/DD)

Please send your completed risk classification report to the following address:

Supervisor, Environmental Stewardship
Oil and Gas Commission
Bag 2, Fort St John, B.C., V1J 2B0
Fax (250) 794-5390

APPENDIX 3

GUIDANCE FOR INFORMATION AND DATA REQUIREMENTS

FOR REPORTS SUBMITTED IN SUPPORT OF SITE CLASSIFICATION

GUIDANCE FOR INFORMATION AND DATA REQUIREMENTS

The following guidelines be used to fulfill reporting requirements in support of the site risk classification.

- All sites undergoing site classification should have undergone an environmental site investigation meeting the technical requirements laid out in the Commission's CoR part 1 form;
- All areas of potential environmental concern (APECs) or identified areas of environmental concern (AECs), should be investigated during the environmental site investigation;
- both soil and groundwater should be addressed at each site under consideration for site classification;
- Every effort should be made to delineate the extent of soil and groundwater contamination at the site prior to the completion of the site classification. The Commission recognizes that this may not be possible at all sites or at the stage at which the site classification is completed, and this will be taken into consideration during the evaluation of the submission;
- All soil sampling completed during site assessment activities should follow the requirements included in MoE Technical Guidance Document 1;
- Groundwater use should be evaluated in accordance with MoE Protocol 21.
- If logistical constraints prevent the investigation of APECs or AECs during the site investigation, then these areas should be clearly noted in reports used for this risk classification and professional judgement used to estimate the potential effects of these areas on the site classification. Sites with APECs or AECs that have not been assessed will be subjected to a greater level of scrutiny and the risk classification subjected to more rigorous evaluation by the Commission. As such, every effort should be made to assess these areas;
- The management of soil and groundwater samples should follow the guidelines laid out in the BC Environmental Field Sampling Manual;
- Composite samples are not acceptable for use in determining the site classification of a site;
- The use of Extractable Petroleum Hydrocarbon (EPH) analysis (EPH₁₀₋₁₉ and

EPH₁₉₋₃₂) in place of Light Extractable Petroleum Hydrocarbon and Heavy Extractable Petroleum Hydrocarbon analysis is acceptable for screening purposes but is not acceptable for confirmation of remediation.

- Applicable groundwater use must be determined in accordance with Protocol 21, “Water Use Determination” and ministry procedures and guidance.
- Where groundwater concentrations exceed UC concentrations near a groundwater receptor, contour maps and cross-sections are required to support conclusions of UC-contaminated groundwater located outside 10 m of the corresponding receptor.
- Where groundwater concentrations exceeding UC concentrations for aquatic life have not been delineated to within 10 m of the high water mark of an aquatic habitat, groundwater concentrations at wells installed nearest 10 m from the high water mark are considered representative of concentrations at that point.
- If the site boundaries of an oil and gas site are located within 1 km of residential, urban park, or agricultural land uses, then the property boundaries for the residential, urban park or agricultural land use should be clearly shown on all maps. As well, groundwater contamination travel times to these sites should be calculated and clearly noted in the report if these sites are downgradient from the Oil and Gas site.