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Name of procedure:
Establishing the Boundaries of a Site

Staff affected:
Ministry of Environment and Land Remediation Section staff

Authority:
Environmental Management Act
Contaminated Sites Regulation

Purpose of procedure:
This procedure provides consistent methods to enable ministry staff to establish the boundaries of a site. The related issues of land uses and services fees are also addressed.

Relationship to previous procedure:
None

Issued by: Director of Waste Management

Director's Approval: Mike Macfarlane
Environmental Management Branch

Date: October 24, 2008

1.0 Definitions:

“**Act**” means the *Environmental Management Act*.

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

“**contaminated sites legal instrument**” includes, but is not limited to, a Contaminated Soil Relocation Agreement, Determination of Contaminated Site, Approval in Principle, Certificate of Compliance, Remediation Order and Voluntary Remediation Agreement, as defined under the Act.

“**Director**” means the Director of Waste Management under the *Environmental Management Act*.

“**ministry**” means the Ministry of Environment.

“**owner**” means a person who

- (a) is in possession,
- (b) has the right of control, or
- (c) occupies or controls the use

of real property, and includes, without limitation, a person who has an estate or interest, legal or equitable, in the real property, but does not include a secured creditor unless the secured creditor is described in section 45 (3) of the Act.

“**parcel**” means an area of land the subject of

- a) a fee simple interest;
- b) a lease or similar form of tenure respecting real property;
- c) a licence of occupation under section 39 of the *Land Act*;
- d) rights granted to occupy land under the *Forest Act* and Forest Practices Code;
- e) an interest in real property which deals with subsurface rights including a tenure under the *Geothermal Resources Act*, the *Mineral Tenure Act*, and the *Petroleum and Natural Gas Act*;
- f) a description by metes and bounds.

“**potential contaminant of concern**” means any contaminant which might be expected to occur at a site based on the historical use of the site, whether or not that substance has been measured in any environmental medium or determined to exceed the numerical standards of the Regulation.

“remediation liability” means the liability held by a responsible person for remediating a contaminated site under Part 4 of the Act.

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

“wide area site” means a site designated by a Director as a wide area site with respect to specified substances and sources where

- (a) the site covers an extensive geographic area and comprises many individual properties, and
- (b) many of the individual properties located within the bounds of the wide area site would, on an individual basis, likely be determined by the Director to be contaminated with one or more of the specified substances in the designation.

2.0 General:

The term “site” is not defined in Part 4 of the *Environmental Management Act* or Contaminated Sites Regulation. During the years that contaminated sites legal instruments such as Certificates of Compliance have been issued, there have been different interpretations by ministry staff, and site owners, operators and their consultants about how a site and its boundaries should be defined under Part 4.

2.1 Scope

This document clarifies how site boundaries should be established in the context of contaminated sites legal instruments. It does not deal with a number of situations and areas where site boundaries maybe an issue, including:

- site profiles under Section 40 of the Act;
- spills of substances and other circumstances where contamination may exist under the definition of “contaminated site” provided under the Act and there is no contaminated sites legal instrument involved;
- wide area sites ;
- sites where independent remediation is being carried out under Section 54 of the Act.

In this procedure, the migration of substances offsite generally refers to migration from one parcel to another. Where land subject to a Crown granted lease borders other Crown land (which may or may not be leased) the latter would be considered offsite from the former. The related issues of site use, part sites and fees for services are also addressed.

2.2 Directors' criteria

There are a number of factors which should be considered when a Director determines the boundaries of a site. These include:

- the existence of any ongoing commercial and industrial operations;
- the land, water and sediment uses at the site, including the primary land use;
- the current and future zoning and land use policies for the proposed site;
- the existence and nature of parcel boundaries;
- whether parcels are bordering;
- the ownership of parcels (including single parcels which have parts with different owners);
- the nature, areal and vertical extent of potential contaminants of concern and/or contaminants;
- the degree to which the entire extent of potential and/or actual contamination will be addressed; and
- other relevant factors presented by consultants and others submitting service requests for contaminated sites legal instruments.

2.3 Legislation and court interpretation

A recent decision¹ of the BC Supreme Court found that under section 12 (1) of the Regulation there could be more than one site within a legal parcel of land and that this section does not contemplate the existence of more than one land use at one site. In addition, it indicated that it would not be in keeping with the intention of the legislation if more than one land use were determined within an area of land which is identifiable according to a primary use. These principles and factors above are reflected in the following procedures.

For reference, sections of the Act and Regulation relevant to this procedure are provided in Appendix 1.

2.4 Role of environmental consultants

In their preparation of contaminated sites service applications, environmental consultants should be aware of and follow the provisions in this procedure document to assist the Director in making timely decisions regarding the issuance of contaminated sites legal instruments. This is particularly important for Approved Professionals preparing draft contaminated sites legal instruments.

2.5 Director's discretion

This document serves as guidance to a Director and is not binding. Each site presents a unique set of circumstances which must be considered when a Director is defining a site, its boundaries and uses, and the associated fees for services requested of the ministry.

3.0 Procedure:

The Director shall use the procedures in this document to establish the boundaries of a site and to establish associated service fees.

4.0 Establishing the land use at a site

As is provided in section 12 (1) of the Regulation, the land use which applies at any given time to a site or part of a site is the primary land use at the surface of the site.

5.0 Site boundaries where parcels are not bordering

Except for a wide area site, a Director should not designate as a single site, land which contains parcels or portions of parcels which are not bordering.

6.0 Vertical site boundaries and land uses

Site boundaries and land uses may be defined vertically as well as horizontally. For example, under section 17 (3) of the Regulation, unless otherwise specified by a Director, regardless of the use of the land at the surface of this site, the soil beyond a depth of 3 metres below the surface of land at a contaminated site is considered to have a commercial land use.

7.0 Addressing the full areal extent of potential contaminants of concern and of contaminants

7.1 The ministry may process an application for a contaminated sites legal instrument for part of a parcel. If delineation is not achieved for the part or there is a potential for contamination of the part by remaining areas of the parcel, the Director may require that the entire extent of potential contaminants of concern and of contaminants be addressed.

If an application for a contaminated sites legal instrument is received for an entire parcel where the ministry knows or suspects that the subject parcel is the source of contamination of a similar nature at bordering parcels or there is a potential for subsequent contamination of a source parcel by bordering parcels, the Director may require that the entire extent of potential contaminants of concern and of contaminants at all the parcels be addressed.

- 7.2 There are several ways in which the entire extent of potential contaminants of concern and/or contaminants may be handled. These include using a single contaminated sites legal instrument such as a Certificate of Compliance for all parcels, or by using a combination of instruments such as a Certificate of Compliance, and a Determination of Contaminated Site (that the site is not contaminated) or an Approval in Principle for contamination at bordering parcel(s).

7.3 Applications for part sites

- 7.3.1 Unless part of a parcel is being used for an ongoing activity (e.g. service station), a Director should not issue a contaminated sites legal instrument for another part of the parcel if the extent of potential or of actual contamination of the entire parcel has not, or will not be investigated in a manner consistent with the requirements of the Act.

- 7.3.2 Where there are contaminants at part of a parcel and potential contaminants of concern at the remaining part of the parcel the Director should decline to issue a contaminated sites legal instrument for the first part of the parcel. Instead, the Director should encourage the client to apply for a Certificate of Compliance or Approval in Principle for the contaminated part and a Determination of Contaminated Site that the remaining part is not contaminated. In this situation, two or more different contaminated sites legal instruments could be issued applicable to different parts of the site and the site boundaries should coincide with the boundaries of the entire parcel. Alternately the different parts of the parcel each could be determined to be separate sites.

- 7.3.3 If the Director considers that there are no potential contaminants of concern (e.g. natural forest lands) and/or no contaminants at the remaining part of the parcel, a Director may issue a contaminated sites legal instrument solely for the part of the parcel which is the subject of the application. In this situation the site must be defined by a metes and bounds description.

7.4 Applications for bordering parcels with similar potential contaminants of concern or similar contamination

7.4.1 If an application for a contaminated sites legal instrument has been received for a parcel which is evidently the source of contaminant migration to a bordering parcel, the procedures in section 7.2 should be observed. The boundaries of the site should be established based on the procedures in sections 8.2 or 8.3, depending on the ownership of the bordering parcels.

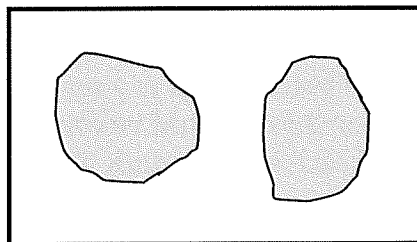
7.4.2 Sometimes bordering parcels may have similar contamination, but it is unlikely that one parcel has been the source of contamination of the other. This can occur where both parcels were contaminated through the placement of contaminated fill from a different site. Unless there is strong evidence that one of the bordering parcels contaminated the other bordering parcel, a Director should consider the two parcels separate sites.

7.5 All contaminated sites legal instruments for a site and bordering parcels contaminated by common sources should be issued concurrently.

8.0 Determining the boundaries of a site with a single land use

8.1 Potential contaminants of concern and/or contaminants at a single parcel

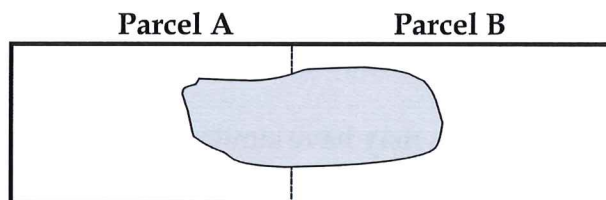
Subject to section 7.3.3, where potential contaminants of concern and/or contaminants are contained within the boundaries of a single parcel, the site should be normally considered to be the entire parcel, defined by the parcel boundaries as illustrated by the dark rectangular border surrounding the shaded delineated areas of environmental concern in the figure below. The site may contain soil, surface water, groundwater, vapours and/or sediments.



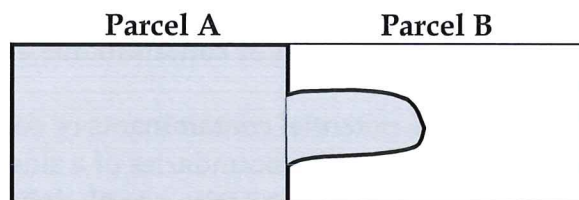
8.2 Potential contaminants of concern and/or contaminants at bordering parcels with the same owner

8.2.1 This subsection deals with potential contaminants of concern and/or contaminants from a common source present in areas which cover two or more

parcels with the same owner. For example, if two parcels are bordering, and potential contaminants of concern and/or contaminants from a common source are present on both parcels, the site would usually be defined by the parcel boundaries of both of the parcels surrounding the shaded delineated area of environmental concern, as is shown by the dark border in the following figure.

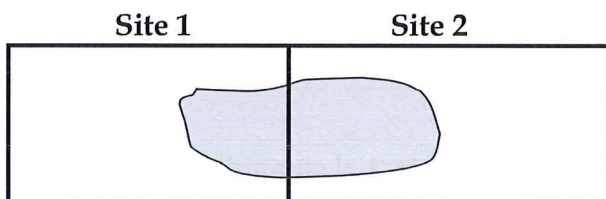


8.2.2 Where common source contamination of a bordering parcel is suspected or discovered, the boundaries of a site may be defined by the parcel boundaries of one parcel, and the border of the potential contaminants of concern and/or contaminants on the bordering parcel (described by metes and bounds). For example, this can occur where a source of contaminants is on one parcel and the contaminants have migrated to a bordering parcel, where both are owned by the same person. This is shown below by the shaded portion with the dark border in the figure below.

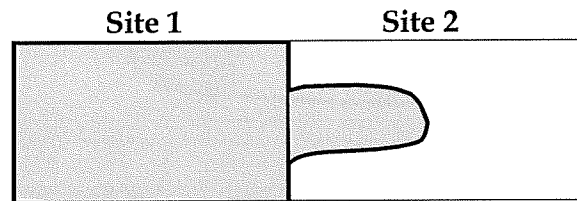


8.3 Potential contaminants of concern and/or contaminants at bordering parcels with different owners

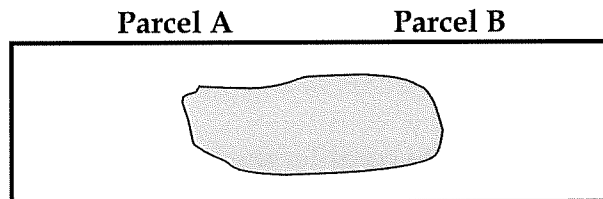
8.3.1 If two parcels are bordering and potential contaminants of concern or contaminants are present on both parcels as a result of sources on both parcels, each parcel, subject to section 8.3.4, should be considered different sites defined by the parcel boundaries of each site, the dark border, and different labels as shown in the following figure.



8.3.2 If contaminant migration onto a bordering parcel is suspected or discovered, the source property and the bordering parcel affected by contaminant migration should be considered different sites if the parcels have different owners. In this case, one instrument could be issued for the entire area of Parcel A (Site 1), the source parcel, and another for the portion of Parcel B affected by contaminant migration from Parcel A (Site 2). Site 2 would be described by metes and bounds. This is illustrated below.



8.3.3 An exception to the procedure in section 8.3.1 and 8.3.2 should be provided when the owners of each parcel are informed of the responsibilities under the Act of sharing a single site, and agree or do not object to becoming responsible for remediation of the other owner's land. In this case both parcels may be considered one site, as shown by the dark border surrounding the shaded delineated area of environmental concern in the example below:



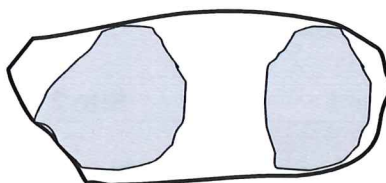
8.3.4 The Director should inform the owners in writing of their responsibilities and potential remediation liability under the Act and provide a 30 day comment period to the owners regarding the Director's intention to determine that the site includes both parcels. If substantive objections are received (for example either party does not concur), and the Director considers that proceeding with each parcel as a separate site would not hinder expeditious remediation of contamination, the Director should consider each parcel a separate site.

8.3.5 Appendix 2 describes the statutory remediation liability implications of multiple ownership of a site.

8.4 Lands without parcel descriptions and boundaries

If lands have no legal description, then the boundaries of the site should be considered the boundary of the potential contaminants of concern and/or of

contaminants if they occur in one area. Where there are multiple areas of potential contaminants of concern and/or of contamination, the boundary of the site should be considered the boundary surrounding all nearby areas where potential contaminants of concern and/or contaminants are present, as is shown by the heavy outer line (described by metes and bounds) surrounding the shaded delineated areas of environmental concern in the following example:



9.0 Determining the boundaries of sites with more than one land use

The Courts have interpreted the Regulation as establishing that there may be only one primary land use at a site.

Where land has multiple existing or planned uses, for the purposes of issuing a contaminated sites legal instrument the site must be divided into areas of singular land use. Bearing in mind the procedures in section 8.0 above, those bordering areas of land with the same primary land use may be combined into one site, and those with different primary land uses should be considered different sites.

Another approach would be to consider the land use with the most stringent environmental quality standards to apply to all areas addressed in an application for a contaminated sites legal instrument. This would simplify the application by requiring fewer contaminated sites legal instruments.

Note that multiple water and sediment uses are acceptable at a site under the Regulation.

10.0 Extent of contamination subject to a contaminated sites legal instrument

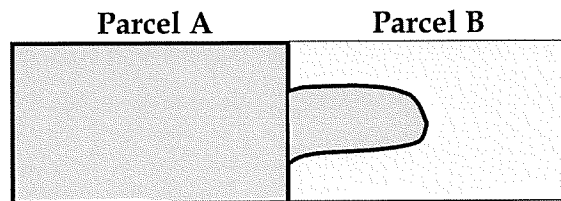
There are situations where it may or may not be appropriate for a Director to issue a contaminated sites legal instrument for part of the contamination at a site.

10.1 Where the site is composed of one parcel, there are multiple contaminants and an application for a contaminated sites legal instrument has been received

addressing some but not all of the contaminants, a Director should normally reject the applications and require that all contaminants be addressed.

- 10.2 In cases with adjacent parcels such as the example in the figure below, the shaded part of Parcel B has been impacted by the migration of contaminants from the bordering source Parcel A. As well, Parcel B has also been contaminated by substances which did not originate from Parcel A.

In this example the owner of Parcel A might apply for a Certificate of Compliance addressing the contaminants at Parcel A and those same contaminants at the part of Parcel B which has the same shading and which originated from Parcel A. Since the owner of Parcel A is not responsible for the contamination at Parcel B (more lightly shaded) which did not originate from Parcel A, the Certificate should indicate that it applies only to the substances at and from Parcel A. Normally the Certificate would not refer to remaining contamination in the lighter shaded the part of at Parcel B which did not originate from Parcel A.



11.0 Implications for ministry service fees

- 11.1 Each site shall be assessed service fees as is required under section 9 (2) of the Regulation.
- 11.2 Fees for contaminated sites legal instruments should be levied on a site by site basis.
- 11.3 Fees for reviews of single site investigation reports, single remediation plans, single confirmation of remediation reports and single risk assessment reports may cover review services for multiple sites if the sites are bordering, are separated only by roads or right-of-ways, and are owned by the same owner or cooperating owners.

12.0 References

- 1) 2004 BCSC 221 Swamy v. Minister of Water, Land and Air Protection, Oral Reasons for Judgment, February 2, 2004.

Revision history

Approved Date	Effective Date	Document Version	Notes
October 24, 2008	October 24, 2008	1.0	

APPENDIX 1

RELEVANT LEGISLATION AND REGULATIONS

Environmental Management Act

- 44 (1) A director may determine whether a site is a contaminated site and, if the site is a contaminated site, the director may determine the boundaries of the contaminated site.
- 53 (6) A director may issue an approval in principle or a certificate of compliance for a part of a contaminated site.
- 59 (1) A director may recover all or a portion of the cost of remediation by
- (a) taking steps to identify and recover costs from responsible persons during or after remediation,
 - (b) arranging to sell or selling any property comprising all or part of the site, or
 - (c) seeking contributions from available cost sharing agreements with government bodies or other persons.

Contaminated Sites Regulation

- 12 (1) For the purpose of using the standards in this regulation, the land use which applies, at any given time, to a particular site or part of a site is the use which is the primary use at the surface of the site.
- (2) For the purpose of using the standards in this regulation, the surface water uses or groundwater uses which apply, at any given time, to a particular site or part of a site are based on
- (a) the uses of the surface water or groundwater at the site or on neighbouring sites, and
 - (b) the potential for the groundwater or surface water to cause pollution.
- (2.1) For the purpose of using the standards in this regulation, the sediment use that applies, at any given time, to a particular site or a part of a site is based on
- (a) the use of sediment at the site or at neighbouring sites, and
 - (b) the potential for the sediment to cause pollution.

26 (6) If a receiver disposes of part of a contaminated site in accordance with subsection (5) (e) or (f), the receiver's obligation under subsection (3) is terminated only with respect to that part.

(9) A receiver who

- (a) has provided a site profile under section 40 (7) of the Act,
- (b) is subject to an obligation to provide a site profile under section 40 (8) of the Act, or
- (c) is in possession of a site for which there is an entry on the site registry indicating that the site
 - (i) has been determined, in whole or in part, to be a contaminated site under section 44 of the Act, or
 - (ii) is otherwise expressly stated to be, in whole or in part, a contaminated site,

must give written notice to a director of

- (d) any proposed distribution of available funds at least 15 days before the date of the proposed distribution, or
- (e) any proposed abandonment of the site or part of the site by the receiver at least 15 days before the date of the proposed abandonment if the receiver
 - (i) resigns the appointment, or
 - (ii) applies to a court for a discharge.

27 (6) When a trustee disposes of part of a contaminated site in accordance with subsection (5) (c) or (d), the trustee's obligation under subsection (3) is terminated only with respect to that part.

27 (9) A trustee who administers trust property for which there is an entry on the site registry indicating that the trust property

- (a) has been determined, in whole or in part, to be a contaminated site under section 44 of the Act, or
- (b) is otherwise expressly stated to be, in whole or in part, a contaminated site

must give written notice to a director of any proposed disposition of the contaminated site, or part of the contaminated site, by the trustee under subsection (5) (c) and (d) at least 15 days before the date of the proposed disposition.

47 (3) When issuing an approval in principle under section 53 (1) of the Act, a director may specify conditions for any or all of the following:

- (a) implementing some or all of the activities described in a proposed remediation plan;
- (b) risk assessment and risk management measures which may be required for part or all of a site for any reason;

There are also a number of provisions which refer to responsibility for remediation of all or part of the contamination at a site.

APPENDIX 2

Discussion

How could issuing a contaminated sites legal instrument affect remediation liability for sites with multiple owners?

The way in which the boundaries of a site are determined can affect potential liability for remediation under the *Environmental Management Act*.

For example, where a Certificate of Compliance is issued for a site composed of two parcels held by different owners, additional remediation liability for each owner may result. The application for a Certificate requires that the applicant provide a legal description and site plan for the site which is the subject of the proposed Certificate. The decision of a Director under the Act to issue a Certificate for the site indicated by the applicant would confirm that the Director considered the site to be contaminated at the time remediation began, pursuant to section 53 (4) of the Act.

As provided in section 45 (1) (a) of the Act, unless there is an applicable exemption (such as the offsite migration of contaminants from one parcel to the other), both owners would be responsible persons since they would be current owners of the site. Further, under section 47 (1) of Act, both would be jointly and separately liable for the costs of remediation of the site if further remediation were required. As a result, either party could be held liable for the entire extent of the contamination remaining at the site. In addition to the remediation liability each party faces for his or her own parcel, each party could become responsible for remediating the other party's parcel.

This is particularly important for a site remediated using the risk-based standards approach, where the site would be considered contaminated after remediation, and remediation liability after the site had been remediated would be higher than if the site had been cleaned up using the numerical standards approach.