Ministry of Environment and Climate Change Strategy

PRELIMINARY DETERMINATION

(Pursuant to Section 44 of the *Environmental Management Act*)

I have made a Preliminary Determination that the site identified in Schedule A of this document **is not** a contaminated site.

This Preliminary Determination is qualified by the requirements and conditions specified in Schedule B.

The site does not have concentrations of the substances specified in Schedule C that exceed the applicable standards and criteria prescribed in the Contaminated Sites Regulation for determining whether a site is a contaminated site.

I have issued this Preliminary Determination based on a review of relevant information including the documents listed in Schedule D. I, however, make no representation or warranty as to the accuracy or completeness of that information.

This is to advise that I will consider submissions received 35 days after delivery of this Preliminary Determination before a Final Determination is made.

In accordance with the *Environmental Management Act*, I will notify persons with an interest in the subject site once a Final Determination is made.

This Preliminary Determination should not be construed as an assurance that there are no hazards present at the site.

March 4, 2019
Date Issued

J.A. Brooke
For Director, *Environmental Management Act*

Schedule A

The site covered by this Preliminary Determination is a management area located on a portion of 8655 Boundary Road, Vancouver, British Columbia which is more particularly known and described as:

Portion of Lot 331, District Lot 331, Plan 18928

Commencing at the southwest corner of Lot 123, District Lot 331, Plan 18928.
Thence, at a bearing of 1 degree 8 minutes 10 seconds a distance of 5.09 m.
Thence, at a bearing of 102 degrees 9 minutes 46 seconds a distance of 45.55 m.
Thence, at a bearing of 181 degrees 5 minutes 53 seconds a distance of 5.09 m.
Thence, at a bearing of 282 degrees 9 minutes 46 seconds a distance of 45.55 m to the point of commencement.

PID: portion of 007-051-905

The site contains part of a legal parcel formerly depicted in an engineering drawing number 625659-002A, prepared by SNC-Lavalin Inc., dated October 29, 2018.

The approximate centre of the management area using the NAD (North American Datum) 1983 convention is:

Latitude:	49°	12'	16.0"
Longitude:	123°	01'	26.4"

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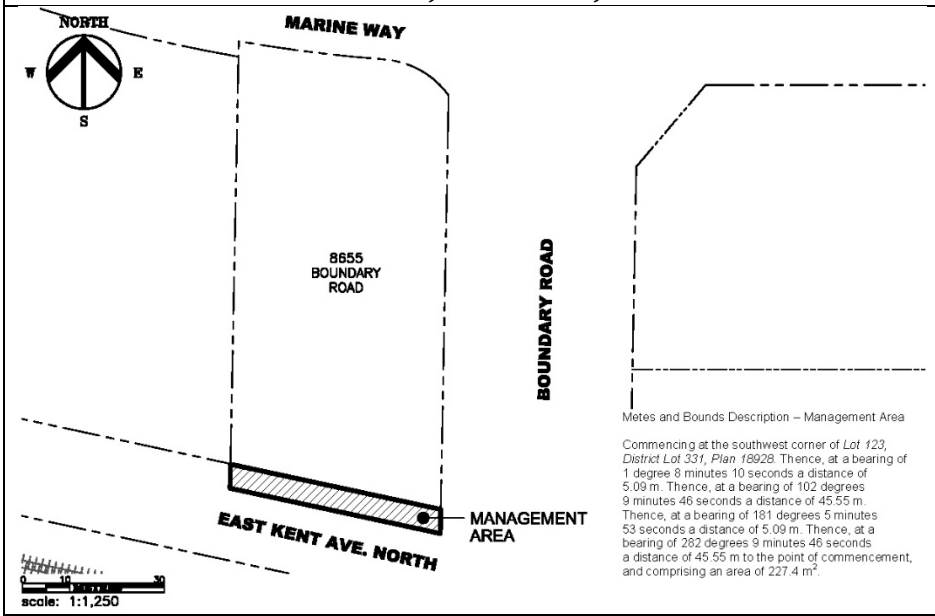
Site Plan, Vancouver, BC



Location Map

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Schedule B

Requirements and Conditions

1. Any changes in land, vapour, or water uses must be promptly identified by the responsible persons in a written submission to the Director. An application for an amendment or new Determination of Contaminated Site may be necessary. The use to which this condition applies are described in Schedule C and in the site investigation documents listed in Schedule D.

   The documents listed in Schedule D indicate that vapour attenuation factors were applied to meet Contaminated Sites Regulation numerical standards at the site. These vapour attenuation factors were selected based on assumptions about the structures existing or expected at the site. These assumptions include the following:

   (a) The area will be used for roadway/landscaping/sidewalk, or
   (b) If built, any future buildings will be slab on grade.

   Any inconsistencies that arise between the future no-building use assumed in the selection of vapour attenuation factors in the documents listed in Schedule D must be promptly identified by the responsible person in a written submission to the Director. An application for an amendment or new Determination of Contaminated Site may be necessary.

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Schedule C

Substances and Uses

Substances evaluated in soil for industrial land soil use:

To meet numerical standards prescribed for defining whether a site is contaminated:

acenaphthene	83-32-9	fluoranthene	206-44-0
		fluorene	86-73-7
aluminum	7429-90-5	HEPHs	NA
anthracene	120-12-7	hexachlorobutadiene	87-68-3
antimony	7440-36-0	indeno(1,2,3-cd)pyrene	193-39-5
arsenic	7440-38-2	iron	7439-89-6
barium	7440-39-3	lead	7439-92-1
benz(a)anthracene	56-55-3	LEPHs	NA
benzene	71-43-2	lithium	7439-93-2
benzo(a)pyrene	50-32-8	manganese	7439-96-5
benzo(b+j)fluoranthenes	205-99-2 &	mercury	7439-97-6
		methyl tert-butyl ether	1634-04-4
	205-82-3	methylnaphthalene, 1-	90-12-0
benzo(k)fluoranthene	207-08-9	methylnaphthalene, 2-	91-57-6
beryllium	7440-41-7	molybdenum	7439-98-7
boron	7440-42-8	naphthalene	91-20-3
bromobenzene	108-86-1	nickel	7440-02-0
bromodichloromethane	75-27-4	phenanthrene	85-01-8
bromoform	75-25-2	phenol	108-95-2
bromomethane	74-83-9	pyrene	129-00-0
butadiene, 1,3-	106-99-0	quinoline	91-22-5
cadmium	7440-43-9	selenium	7782-49-2
carbon tetrachloride	56-23-5	silver	7440-22-4
chlorobenzene	108-90-7	strontium	7440-24-6
chloroform	67-66-3	tetrachloroethane, 1,1,2,2-	79-34-5
chromium	7440-47-3	tetrachloroethane, 1,1,1,2-	630-20-6
chrysene	218-01-9	tetrachloroethylene	127-18-4

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cobalt	7440-48-4	thallium	7440-28-0
copper	7440-50-8	tin	7440-31-5
dibenz(a,h)anthracene	53-70-3	toluene	108-88-3
dibromochloromethane [DBCM]	124-48-1	trichlorobenzene, 1,2,3-	87-61-6
dibromoethane- 1,2	106-93-4	trichlorobenzene, 1,2,4-	120-82-1
dichlorobenzene, 1,2-	95-50-1	trichloroethane, 1,1,1-	71-55-6
dichlorobenzene, 1,3-	541-73-1	trichloroethane, 1,1,2-	79-00-5
dichlorobenzene, 1,4-	106-46-7	trichloroethylene	79-01-06
dichloroethane, 1,1-	75-34-3	trichlorofluoromethane	75-69-4
dichloroethane, 1,2-	107-06-2	uranium	7440-61-1
dichloroethylene, 1,1-	75-35-4	vanadium	7440-62-2
dichloroethylene, 1,2-cis	156-59-2	vinyl chloride	75-01-4
dichloroethylene, 1,2-trans	156-60-5	VPHs	NA
dichloromethane	75-09-2	xylenes	1330-20-7
dichloropropane, 1,2-	78-87-5	zinc	7440-66-6
dichloropropene, 1,3- (cis+trans)	542-75-6		
ethylbenzene	100-41-4		

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Substances evaluated in water for freshwater aquatic life water use:

To meet numerical standards prescribed for defining whether a site is contaminated:

acenaphthene	83-32-9	lead	7439-92-1
acridine	92-26-2	LEPHw	NA
anthracene	120-12-7	methyl tert-butyl ether	1634-04-4
antimony	7440-36-0	mercury	7439-97-6
arsenic	7440-38-2	molybdenum	7439-98-7
barium	7440-39-3	naphthalene	91-20-3
benzene	71-43-2	nickel	7440-02-0
benz(a)anthracene	56-55-3	phenanthrene	85-01-8
benzo(a)pyrene	50-32-8	phenol	108-95-2
beryllium	7440-41-7	propylene glycol, 1,2-	57-55-6
boron	7440-42-8	pyrene	129-00-0
cadmium	7440-43-9	quinoline	91-22-5
carbon tetrachloride	56-23-5	selenium	7782-49-2
chlorobenzene	108-90-7	silver	7440-22-4
chloroform	67-66-3	tetrachloroethylene	127-18-4
chromium	7440-47-3	thallium	7440-28-0
chrysene	218-01-9	titanium	7440-32-6
cobalt	7440-48-4	toluene	108-88-3
copper	7440-50-8	trichlorobenzene, 1,2,3-	87-61-6
dichlorobenzene, 1,2-	95-50-1	trichlorobenzene, 1,2,4-	120-82-1
dichlorobenzene, 1,3-	541-73-1	trichloroethylene	79-01-06
dichlorobenzene, 1,4-	106-46-7	uranium	7440-61-1
dichloroethane, 1,2-	107-06-2	VHw_{6-10}	NA
dichloromethane	75-09-2	VPHw	NA
$EPHw_{10-19}$	NA	xylenes, total	1330-20-7
ethylbenzene	100-41-4	zinc	7440-66-6
ethylene glycol	107-21-1		
fluoranthene	206-44-0		
fluorene	86-73-7		
hexachlorobutadiene	87-68-3		

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Substances evaluated in water for marine and estuarine aquatic life water use:

To meet numerical standards prescribed for defining whether a site is contaminated:

acenaphthene	83-32-9	fluorene	86-73-7
acridine	92-26-2	hexachlorobutadiene	87-68-3
anthracene	120-12-7	lead	7439-92-1
antimony	7440-36-0	LEPHw	NA
arsenic	7440-38-2	methyl tert-butyl ether	1634-04-4
barium	7440-39-3	mercury	7439-97-6
benzene	71-43-2	molybdenum	7439-98-7
benz(a)anthracene	56-55-3	naphthalene	91-20-3
benzo(a)pyrene	50-32-8	phenanthrene	85-01-8
beryllium	7440-41-7	phenol	108-95-2
boron	7440-42-8	propylene glycol, 1,2-	57-55-6
carbon tetrachloride	56-23-5	pyrene	129-00-0
chlorobenzene	108-90-7	quinoline	91-22-5
chloroform	67-66-3	selenium	7782-49-2
chromium	7440-47-3	tetrachloroethylene	127-18-4
chrysene	218-01-9	thallium	7440-28-0
cobalt	7440-48-4	titanium	7440-32-6
dichlorobenzene, 1,2-	95-50-1	toluene	108-88-3
dichlorobenzene, 1,3-	541-73-1	trichlorobenzene, 1,2,3-	87-61-6
dichlorobenzene, 1,4-	106-46-7	trichlorobenzene, 1,2,4-	120-82-1
dichloroethane, 1,2-	107-06-2	trichloroethylene	79-01-06
dichloromethane	75-09-2	uranium	7440-61-1
$EPHw_{10-19}$	NA	VHw_{6-10}	NA
ethylbenzene	100-41-4	VPHw	NA
ethylene glycol	107-21-1	xylenes, total	1330-20-7
fluoranthene	206-44-0		

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Substances evaluated in water for drinking water use:

To meet numerical standards prescribed for defining whether a site is contaminated:

acenaphthene	83-32-9	ethylene glycol	107-21-1
aluminum	7429-90-5	hexachlorobutadiene	87-68-3
anthracene	120-12-7	fluoranthene	206-44-0
antimony	7440-36-0	fluorene	86-73-7
arsenic	7440-38-2	lead	7439-92-1
barium	7440-39-3	lithium	7439-93-2
benz(a)anthracene	56-55-3	methyl tert-butyl ether	1634-04-4
benzene	71-43-2	methylnaphthalene, 1-	90-12-0
benzo(a)pyrene	50-32-8	methylnaphthalene, 2-	91-57-6
		mercury	7439-97-6
benzo(b+j)fluoranthenes	205-99-2 & 205-82-3	molybdenum	7439-98-7
beryllium	7440-41-7	naphthalene	91-20-3
boron	7440-42-8	nickel	7440-02-0
Bromobenzene	108-86-1	phenol	108-95-2
bromodichloromethane [BDCM]	75-27-4	propylene glycol, 1,2-	57-55-6
bromoform	75-25-2	pyrene	129-00-0
bromomethane	74-83-9	quinoline	91-22-5
butadiene, 1,3-	106-99-0	selenium	7782-49-2
cadmium	7440-43-9	sodium	17341-25-2
carbon tetrachloride	56-23-5	strontium	7440-24-6
chlorobenzene	108-90-7	tetrachloroethane, 1,1,1,2-	630-20-6
chloroform	67-66-3	tetrachloroethane, 1,1,2,2-	79-34-5
chromium	7440-47-3	tetrachloroethylene	127-18-4
chrysene	218-01-9	tin	7440-31-5
cobalt	7440-48-4	toluene	108-88-3
copper	7440-50-8	trichlorobenzene, 1,2,3-	87-61-6
dibenz(a,h)anthracene	53-70-3	trichlorobenzene, 1,2,4-	120-82-1
dibromochloromethane [DBCM]	124-48-1	trichloroethane, 1,1,1-	71-55-6
dibromoethane- 1,2	106-93-4	trichloroethane, 1,1,2-	79-00-5

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dichlorobenzene, 1,2-	95-50-1	trichloroethylene	79-01-06
dichlorobenzene, 1,4-	106-46-7	trichlorofluoromethane	75-69-4
dichlorodifluoromethane	75-71-8	1,1,2-Trichloro-1,2,2-trutrifluoroethane	76-13-1
dichloroethane, 1,1-	75-34-3	Triethylene gylcol	112-27-6
dichloroethane, 1,2-	107-06-2	uranium	7440-61-1
dichloroethylene, 1,1-	75-35-4	vanadium	7440-62-2
dichloroethylene, 1,2-cis-	156-59-2	VHw_{6-10}	NA
dichloroethylene, 1,2-trans-	156-60-5	vinyl chloride	75-01-4
dichloromethane	75-09-2	xylenes, total	1330-20-8
dichloropropane, 1,2-	78-87-5	zinc	7440-66-6
dichloropropene, 1,3- (cis + trans)	542-75-6		
$EPHw_{10-19}$	NA		
ethylbenzene	100-41-4		

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Substances evaluated in soil vapour for industrial land vapour use:

To meet numerical standards prescribed for defining whether a site is contaminated:

acetone	67-64-1	methyl ethyl ketone [MEK]	78-93-3
benzene	71-43-2	methylisobutylketone [MIBK]	108-10-1
bromobenzene	108-86-1	methylcyclohexane	108-87-2
bromodichloromethane [BDCM]	75-27-4	methyl tert-butyl ether	1634-04-4
Bromomethane	74-83-9	naphthalene	91-20-3
butadiene, 1,3-	106-99-0	n-decane	124-18-5
carbon disulfide	75-15-0	n-hexane	110-54-3
carbon tetrachloride	56-23-5	tetrachloroethane, 1,1,2,2-	79-34-5
chlorobenzene	108-90-7	tetrachloroethylene	127-18-4
dibromoethane, 1,2-	106-93-4	toluene	108-88-3
dichlorobenzene, 1,2-	95-50-1	trichlorobenzene, 1,2,4-	120-82-1
dichloroethane, 1,1-	75-34-3	trichloroethane, 1,1,1-	71-55-6
dichloroethane, 1,2-	107-06-2	trichloroethane, 1,1,2-	79-00-5
dichloroethylene, 1,1-	75-35-4	trichloroethylene	79-01-06
dichloroethylene, 1,2- cis	156-59-2	trichlorofluoromethane	75-69-4
dichloroethylene, 1,2- trans	156-60-5	trimethylbenzene, 1,2,4-	95-63-6
dichloromethane	75-09-2	trimethylbenzene, 1,3,5-	108-67-8
dichloropropane, 1,2-	78-87-5	vinyl chloride	75-01-4
ethyl acetate	141-78-6	VPHv	NA
ethylbenzene	100-41-4	xylenes, total	1330-20-7
isopropylbenzene	98-82-8		

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Schedule D

Documents

- *Summary of Site Condition,* prepared by SNC-Lavalin Inc, dated January 2019.

- *Protocol 6 Approval Application for Two Portions of Land Located at the North and South Ends of 8655 Boundary Road, Vancouver, British Columbia* prepared by ENV, dated January 11, 2019.

- *Stage 1 and 2 Preliminary Site Investigation, For Management Areas adjacent 8655 Boundary Road, Vancouver, BC, Location Code: P03037,* prepared by SNC-Lavalin Inc., dated November 6, 2018.

- *Application for Determination of a Local Background Concentration for Dissolved Lithium in Groundwater, 8655 Boundary Road, Vancouver, British Columbia,* prepared by ENV, dated October 23, 2018.

- *Updated Soil, Groundwater and Vapour Data Package in regard to the Request for a Protocol 6 Preapproval - Former Flying J Branded Card Lock / Proposed Shell Service Station at 8655 Boundary Road, Vancouver, BC ("the Site"), Shell Location No: P03037 (ENV Site #19276),* prepared by SNC-Lavalin Inc., dated September 4, 2018.

- *Request for Local Background Determination for Lithium in Groundwater and a Protocol 6 Preapproval Request - Former Flying J Branded Card Lock / Proposed Shell Service Station at 8655 Boundary Road, Vancouver, BC ("the Site"), Shell Location No: P03037 (ENV Site #19276),* prepared by SNC-Lavalin Inc., dated May 17, 2018.

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