



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 30 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.

2017-12-20
Date Issued


Alan W. McCammon
For Director, *Environmental Management Act*

Schedule A


The site covered by this Preliminary Determination is located at 853 Hot Springs Road, Harrison Hot Springs, British Columbia which is more particularly known and described as:

Lot 53, Section 12, Township 4, Range 29, West of the 6th Meridian, New Westminster District
Plan 52361
PID: 004-306-996

The approximate center of the site using the NAD (North American Datum) 1983 convention is:

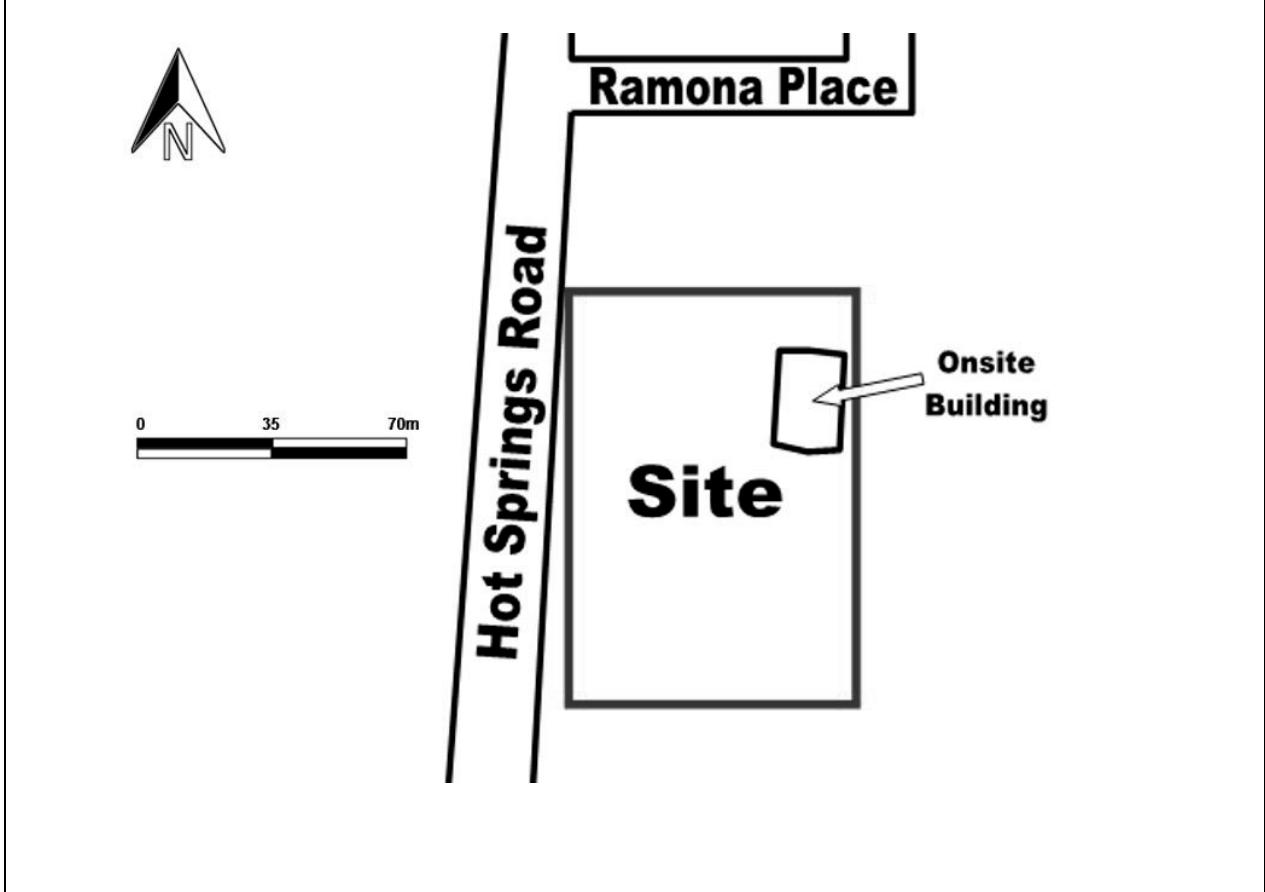
Latitude: 49° 17' 9.95"
Longitude: 121° 46' 49.21"

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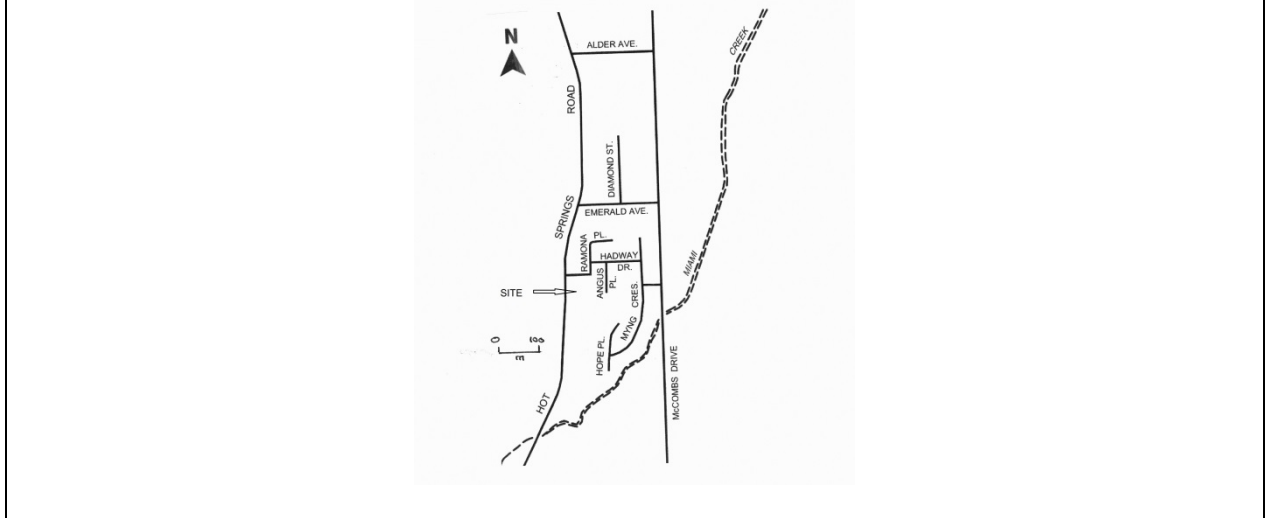

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Site Plan, Harrison Hot Springs, BC




Location Map, Harrison Hot Springs, BC



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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 person in a written submission to the Director. An application for an amendment or new Determination may be necessary. The uses 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, locations and depths of buildings existing or expected at the site. These assumptions include the following:

- (a) Any building erected may not have a foundation that extends below the site grade that existed on September 1, 2017.

Any inconsistencies that arise between the structures, locations and depths of proposed or constructed buildings at the site and the range of structures locations and depths of buildings assumed in the selection of vapour attenuation factors in the documents listed in Schedule D must be promptly identified by the responsible person(s) in a written submission to the Director. An application for an amendment or new Determination may be necessary.

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Schedule C

Substances and Uses

Substances evaluated in soil for residential land soil use:

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

- Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, tin, vanadium, zinc ;
- VPHs, LEPHs, HEPHs;
- Carbon tetrachloride, chloroform, chlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, dichloroethane (1,1-, 1,2-), dichloroethene (1,1-, 1,2-), dichloromethane , 1,2-dichloropropane, 1,3-dichloropropene (cis and trans), tetrachloroethene (PERC), trichloroethane (1,1,1-, 1,1,2-), trichloroethene (TCE), trichlorobenzene;
- Benzene, ethylbenzene, styrene, toluene, xylene;
- Benz[a]anthracene, benzo[b]fluoranthene , benzo[k]fluoranthene, benzo[a]pyrene , dibenz[a,h]anthracene, indeno[1,2,3 -cd] pyrene , naphthalene , phenanthrene , pyrene ;
- Acetone, BDCM (bromodichloromethane) , bromoform (tribromomethane), bromomethane (methyl bromide), 2-butanone (methyl ethyl ketone) , chloroethane (ethyl chloride), chloroethene (vinyl chloride), chloromethane (methyl chloride), DBCM (dibromochloromethane) , 1,2-dichloroethene (cis) (1,2-dichlorethylene (cis)), 1,2-dichloroethene (trans) (1,2-dichlorethylene (trans)), 1,2-dichlorethylene (cis) (1,2-dichloroethene (cis)), 1,2-dichlorethylene (trans) (1,2-dichloroethene (trans)), 1,2-dichloropropane (propylene dichloride), 1,3-dichloropropene, EDB (ethylene dibromide) (1,2-dibromoethane), ethyl chloride (chloroethane), ethylene dibromide (EDB) (1,2-dibromomethane), lithium, methyl bromide (bromomethane), methyl chloride (chloromethane), methyl ethyl ketone (2-butanone), 4-methyl-2-pentanone (methyl isobutyl ketone) , methyl tert-butyl ether (MTBE), MTBE (methyl tert-butyl ether), 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane , tin, tribromomethane (bromoform), 1,1,1-trichloroethane, 1,1,2-trichloroethane, vinyl chloride (chloroethene);
- Ethylene glycol.

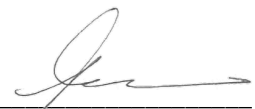
Substances evaluated in vapour for residential land vapour use:

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

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- Benzene, 1,3-butadiene, n-decane, 1,2-dibromoethane (ethylene dibromide) (EDB), 1,2-dichloroethane, ethylbenzene, n-hexane, isopropylbenzene (cumene), methylcyclohexane;
- Methyl tert-butyl ether (MTBE), naphthalene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, VPHv, xylenes mixture.

Substances evaluated in water for drinking water use:

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

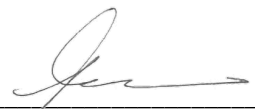
- Aluminum, antimony, arsenic, barium, boron, cadmium, chromium, copper, iron, lead, magnesium, manganese, mercury, molybdenum, selenium, sodium, uranium, zinc;
- Methyl tertiary butyl ether (MTBE), Vhw 6-10, EPHw 10-19;
- Vinyl chloride, dichlorobenzene, 1,2-, dichlorobenzene, 1,4-, dichloroethane, 1,2-, dichloroethylene (dichloroethene, 1,1-), tetrachloroethylene (tetrachloroethene, 1,1,2,2-), trichloroethylene (trichloroethene, 1,1,2-), bromodichloromethane (BDCM), dibromochloromethane (DBCM), dichloromethane (methylene chloride), tetrachloromethane (carbon tetrachloride), tribromomethane (bromoform), trichloromethane (chloroform);
- Benzene, ethylbenzene, toluene, xylenes (total);
- Benzo[a]pyrene;
- Acetone, BCDM (bromodichloromethane), bromoform (tribromomethane), bromomethane (methyl bromide), 2-butanone (methyl ethyl ketone), chloroethane (ethyl chloride), chloroethene (vinyl chloride), chloromethane (methyl chloride), DBCM (dibromochloromethane), 1,2-dichloroethene (cis) (1,2-dichloroethylene (cis)), 1,2-dichloroethene (trans) (1,2-dichloroethylene (trans)), 1,2-dichloroethylene (cis) (1,2-dichloroethene (cis)), 1,2-dichloroethylene (trans) (1,2-dichloroethene (trans)), 1,2-dichloropropane (propylene dichloride), 1,3-dichloropropene, EDB (ethylene dibromide) (1,2-dibromoethane), ethyl chloride (chloroethane), ethylene dibromide (EDB) (1,2-dibromomethane), lithium, methyl bromide (bromomethane), methyl chloride (chloromethane), methyl ethyl ketone (2-butanone), 4-methyl-2-pentanone (methyl isobutyl ketone), methyl tert-butyl ether (MTBE), MTBE (methyl tert-butyl ether), 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, tin, tribromomethane (bromoform), 1,1,1-trichloroethane, 1,1,2-trichloroethane, vinyl chloride (chloroethene).

Substances evaluated in water for freshwater aquatic life water use:

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- Aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, titanium , uranium , zinc;
- Methyl tertiary butyl ether (MTBE), VPHw, LEPHw , VHw 6-10, EPHw 10-19;
- Dichlorobenzene, 1,2-, dichlorobenzene, 1,3-, dichlorobenzene, 1,4-, trichlorobenzene, 1,2,4-, dichloroethane, 1,2,-, tetrachloroethylene (tetrachloroethene, 1,1,2,2-), trichloroethylene (trichloroethene , 1,1,2-), dichloromethane (methylene chloride), tetrachloromethane (carbon tetrachloride), trichloromethane (chloroform);
- Ethylene glycol, propylene glycol, 1,2-;
- Benzene, ethylbenzene, styrene, toluene;
- Acenaphthene, acridine, anthracene, benzo[a]anthracene, benzo[a]pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, pyrene, quinoline.

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Schedule D

Documents

Summary of Site Condition, 853 Hot Springs Road, Harrison Hot Springs, BC, prepared by Steve Graham, P.Geo., S. Graham Engineering and Geology Inc., September 22, 2017.

Soil Vapour Investigation of 853 Hot Springs Road, Harrison Hot Springs, BC, Tony Lai, B.Tech, Dipl. T. and Jim Williams, Dipl. Tech., A.C.M. Environmental Corporation, September 1, 2017.

Regarding: Update of Stage 1 Report for the Site Located at 853 Hot Springs Road, Harrison Hot Springs, BC, [letter report], Jim Williams, Dipl. Tech, A.C.M. Environmental Corporation, May 24, 2017.

Preliminary Site Investigation, Stage 2 Environmental Site Assessment of 853 Hot Springs Road, Harrison Hot Springs, BC, Tony Lai, B.Tech, Dipl. T., A.C.M. Environmental Corporation, April 21, 2017.

Regarding: Update of Stage 1 Report for the Site Located at 853 Hot Springs Road, Harrison Hot Springs, BC, [letter report], Jim Williams, Dipl. Tech, A.C.M. Environmental Corporation, May 27, 2014.

Stage 1 Preliminary Site Investigation, 853 Hot Springs Road, Harrison Hot Springs B.C., David R. Kelly, P.Eng., D. Kelly Environmental Consulting Limited, November 12, 2004.

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