



VIA EMAIL: dave@waterwheeldev.com

Victoria File: 26250-20/27575
Site ID: 27575

Date: July 25, 2023

Dave Mander
Waterwheel Development Corporation
2255 – 4871 Shell Road
Richmond, BC, V6X 3Z6

Dear Dave Mander:

Re: Preliminary Determination - 2660 Simpson Road, Richmond, B.C.


Please find enclosed a Preliminary Determination respecting the site referenced above and be advised of the following:

1. The Director has made a Preliminary Determination that the site is not contaminated because the numerical standards and criteria of the Contaminated Sites Regulation have been met at the site.
2. Information about the site will be included in the Site Registry established under the *Environmental Management Act*.
3. The provisions of this Preliminary Determination are without prejudice to the right of the Director to make orders or impose requirements as the Director may deem necessary in accordance with applicable laws. Nothing in this Preliminary Determination will restrict or impair the Director's power in this regard.
4. A qualified environmental consultant should be available to identify, characterize and appropriately manage:
 - (a) any environmental media that may be contaminated, or
 - (b) removal of soil under the provisions of Part 8 of the Contaminated Sites Regulation and may be encountered during any future work at the site.
5. Groundwater wells that are no longer required must be properly decommissioned in accordance with the *Water Sustainability Act's* Groundwater Protection Regulation.
6. Please note that future site development may create preferential pathways for vapour. In this event, further assessment and remediation of vapour may be warranted.

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

If you require clarification of any aspect of this Preliminary Determination, please contact the undersigned at site@gov.bc.ca (toll free via Enquiry BC at 1-800-663-7867).

Yours truly,

A handwritten signature in blue ink that reads "C. Delaney".

Colleen Delaney
Senior Professional Reliance Officer

Enclosure

cc: City of Richmond
(VIA EMAIL) devapps@richmond.ca

Nathan Chong, Prospera Credit Union
(BY EMAIL) nathan.chong@propera.ca

David Kettlewell, Approved Professional, Active Earth Engineering Ltd.
(VIA EMAIL) david.kettlewell@activeearth.ca

Anna Popova, CSAP Society
(VIA EMAIL) apopova@csapsociety.bc.ca

Client Information Officer, ENV, Victoria
esp_cio@Victoria1.gov.bc.ca



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.

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Colleen Delaney
For Director, *Environmental Management Act*

Schedule A

The site covered by this Preliminary Determination is located at 2660 Simpson Road, Richmond, British Columbia which is more particularly known and described as:

Lot 46 Section 24 Block 5 North Range 6 West New Westminster District Plan 34548
PID: 007-071-621

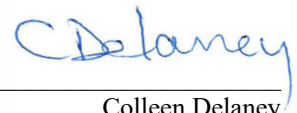
The approximate centre of the site using the NAD (North American Datum) 1983 convention is:

Latitude: 49° 11' 40.9"
Longitude: 123° 05' 52.6"

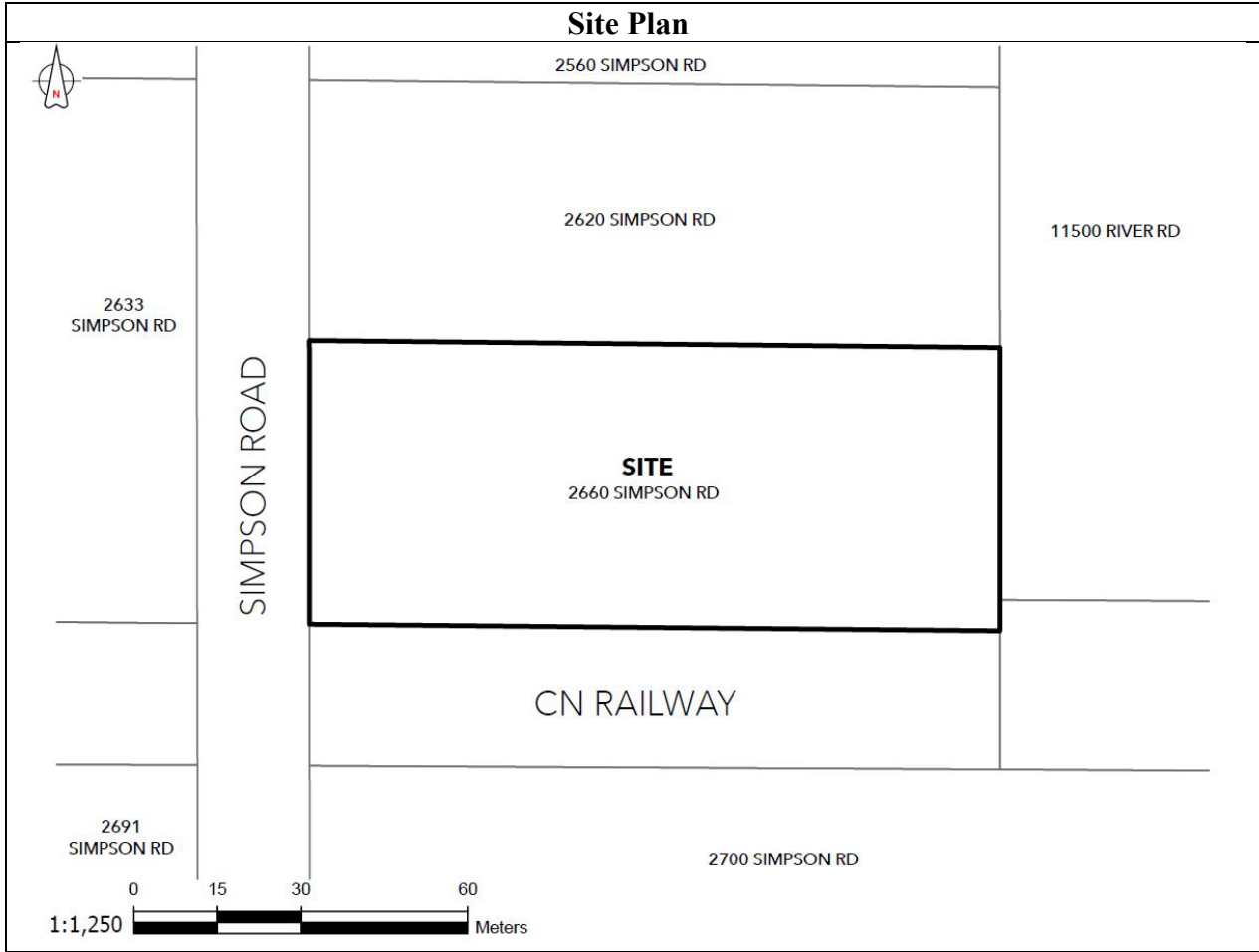
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Schedule B

Requirements and Conditions

1. Any changes in land, vapour, or water use 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. 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 a Contaminated Sites Regulation numerical standard 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) *“Future buildings on the Site will be constructed with slab-on-grade”.*

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 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 residential land soil use:

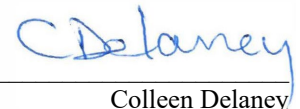
To meet numerical standards prescribed for defining whether a site is contaminated:

acenaphthene	83-32-9	dichlorobenzene, 1,2-	95-50-1
aluminum	7429-90-5	dichlorobenzene, 1,3-	541-73-1
anthracene	120-12-7	dichlorobenzene, 1,4-	106-46-7
antimony	7440-36-0	dichloroethane, 1,1-	75-34-3
arsenic	7440-38-2	dichloroethane, 1,2-	107-06-2
barium	7440-39-3	dichloroethylene, 1,1-	75-35-4
benz(a)anthracene	56-55-3	dichloroethylene, 1,2-cis-	156-59-2
benzene	71-43-2	dichloroethylene, 1,2-trans-	156-60-5
benzo(a)pyrene	50-32-8	dichloromethane	75-09-02
	205-99-2 &		
benzo(b+j)fluoranthenes	205-82-3	dichlorophenol, 2,3-	576-24-9
benzo(k)fluoranthene	207-08-9	dichlorophenol, 2,6-	87-65-0
beryllium	7440-41-7	dichlorophenol, 3,4-	95-77-2
boron	7440-42-8	dichlorophenol, 3,5-	591-35-5
bromodichloromethane [BDCM]	75-27-4	dichloropropane, 1,2-	106-93-4
bromoform	75-25-2	dichloropropene, 1,3- (cis+trans)	542-75-6
cadmium	7440-43-9	dimethylphenol, 2,4-	105-67-9
carbon tetrachloride	56-23-5	ethylbenzene	100-41-4
chrysene	218-01-9	ethylene glycol	107-21-1
chlorobenzene	108-90-7	fluoranthene	206-44-0
chloroform	67-66-3	fluorene	86-73-7
chlorophenol, 2-	95-57-8	HEPHs	NA
chlorophenol, 3-	108-43-0	iron	7439-89-6
chlorophenol, 4-	106-48-9	indeno(1,2,3-cd) pyrene	193-39-5
chromium	7440-47-3	lead	7439-92-1
cobalt	7440-48-4	LEPHs	NA
copper	7440-50-8	lithium	7439-93-2
dibenz(a,h)anthracene	53-70-3	manganese	7439-96-5
dibromochloromethane [DBCM]	124-48-1	mercury	7439-97-6

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methyl tert-butyl ether [MTBE]	1634-04-4	tetrachlorophenol, 2,3,4,6-	58-90-2
methylnaphthalene, 1-	90-12-0	tetrachlorophenol, 2,3,5,6-	935-95-5
methylnaphthalene, 2-	91-57-6	thallium	7440-28-0
methylphenol, 2-	95-48-7	tin	7440-31-5
methylphenol, 3-	108-39-4	trichloroethane, 1,1,1-	71-55-6
methylphenol, 4-	106-44-5	trichloroethane, 1,1,2-	79-00-5
molybdenum	7439-98-7	trichloroethylene	79-01-6
naphthalene	91-20-3	trichlorofluoromethane	75-69-4
nickel	7440-02-0	trichlorophenol, 2,3,4-	15950-66-0
pentachlorophenol [PCP]	87-86-5	trichlorophenol, 2,3,5-	933-78-8
phenanthrene	85-01-8	trichlorophenol, 2,3,6-	933-75-5
phenol	108-95-2	trichlorophenol, 2,4,5-	95-95-4
pyrene	129-00-0	trichlorophenol, 2,4,6-	88-06-2
quinoline	91-22-5	trichlorophenol, 3,4,5-	609-19-8
selenium	7782-49-2	triethylene glycol	112-27-6
silver	7440-22-4	toluene	108-88-3
strontium	7440-24-6	tungsten	7440-33-7
styrene	100-42-5	uranium	7440-61-1
tetrachloroethane, 1,1,1,2-	630-20-6	vanadium	7440-62-2
tetrachloroethane, 1,1,2,2-	79-34-5	vinyl chloride	75-01-4
tetrachloroethylene	127-18-4	VPHs	NA
tetrachlorophenol, 2,3,4,5-	4901-51-3	zinc	7440-66-6
		xylenes	1330-20-7

Substances evaluated in vapour for residential land vapour use:

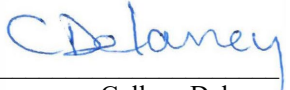
To meet numerical standards prescribed for defining whether a site is contaminated:

acetone	67-64-1	carbon disulfide	75-15-0
benzene	71-43-2	carbon tetrachloride	56-23-5
bromobenzene	108-86-1	chlorobenzene	108-90-7
bromodichloromethane [BDCM]	75-27-4	chloroethane	75-00-3
bromoform	75-25-2	chloroform	67-66-3
bromomethane	74-83-9	chloromethane	74-87-3
butadiene, 1,3-	106-99-0	chlorophenol, 2-	95-57-8
chlorotoluene, 2-	95-49-8	dibromo-3-chloropropane, 1,2-	96-12-8
dibromochloromethane [DBCM]	124-48-1	dibromoethane	74-95-3

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dibromoethane, 1,2-	106-93-4	methylcyclohexane	108-87-2
dichlorobenzene, 1,2-	95-50-1	n-decane	124-18-5
dichlorobenzene, 1,3-	541-73-1	n-hexane	110-54-3
dichlorobenzene, 1,4-	106-46-7	styrene	100-42-5
dichlorodifluoromethane	75-71-8	tetrachloroethane, 1,1,1,2-	630-20-6
dichloroethane, 1,1-	75-34-3	tetrachloroethane, 1,1,2,2-	79-34-5
dichloroethane, 1,2-	107-06-2	tetrachloroethylene	127-18-4
dichloroethylene, 1,1-	75-35-4	trichlorobenzene, 1,2,4-	120-82-1
dichloroethylene, 1,2-cis-	156-59-2	trichloroethane, 1,1,1-	71-55-6
dichloroethylene, 1,2-trans-	156-60-5	trichlorobenzene, 1,2,4-	615-54-3
dichloromethane	75-09-2	trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1
dichloropropane, 1,2-	78-87-5	trichloroethane, 1,1,2-	79-00-5
dichloropropane, 1,3-	142-28-9	trichloroethylene	127-18-4
dichloropropene, 1,3- (cis+trans)	542-75-6	trichlorofluoromethane	75-69-4
ethyl acetate	141-78-6	trichloropropane, 1,2,3-	96-18-4
ethylbenzene	100-41-4	trimethylbenzene, 1,2,4-	95-63-6
hexachlorobutadiene	87-68-3	trimethylbenzene, 1,3,5-	108-67-8
isopropylbenzene	98-82-8	toluene	108-88-3
methyl ethyl ketone [MEK]	78-93-3	vinyl chloride	75-01-4
methyl isobutyl ketone [MIBK]	108-10-1	xylenes, total	1330-20-7
methyl tert-butyl ether [MTBE]	1634-04-4		

Substances evaluated in water for freshwater aquatic life water use:

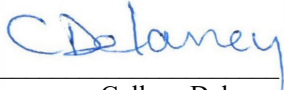
To meet numerical standards prescribed for defining whether a site is contaminated:

acenaphthene	83-32-9	benzo(a)pyrene	50-32-8
acridine	260-94-6	barium	7440-39-3
anthracene	120-12-7	beryllium	7440-41-7
antimony	7440-36-0	boron	7440-42-8
arsenic	7440-38-2	cadmium	7440-43-9
benzene	71-43-2	chromium	7440-47-3
benz(a)anthracene	56-55-3	chrysene	218-01-9
cobalt	7440-48-4	copper	7440-50-8
carbon tetrachloride	56-23-5	chlorobenzene	108-90-7
chloroform	67-66-3	chlorophenol, 2-	95-57-8

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chlorophenol, 3-	108-43-0	pentachlorophenol [PCP]	87-86-5
chlorophenol, 4-	106-48-9	pyrene	129-00-0
dichlorobenzene, 1,2-	95-50-1	propylene glycol, 1,2-	57-55-6
dichlorobenzene, 1,3-	541-73-1	quinoline	91-22-5
dichlorobenzene, 1,4-	106-46-7	selenium	7782-49-2
dichloroethane, 1,2-	107-06-2	silver	7440-22-4
dichloromethane	75-09-2	styrene	100-42-5
dichlorophenol, 2,3-	576-24-9	thallium	7440-28-0
dichlorophenol, 2,6-	87-65-0	titanium	7440-32-6
dichlorophenol, 3,4-	95-77-2	tetrachloroethylene	127-18-4
dichlorophenol, 3,5-	591-35-5	tetrachlorophenol, 2,3,4,5-	4901-51-3
ethylbenzene	100-41-4	tetrachlorophenol, 2,3,4,6-	58-90-2
EPHw10-19	NA	tetrachlorophenol, 2,3,5,6-	935-95-5
ethylene glycol	107-21-1	trichloroethylene	127-18-4
fluoranthene	206-44-0	trichlorobenzene, 1,2,4-	120-82-1
fluorene	86-73-7	trichlorophenol, 2,3,4-	15950-66-0
lead	7439-92-1	trichlorophenol, 2,3,5-	933-78-8
LEPHw	NA	trichlorophenol, 2,3,6-	933-75-5
mercury	7439-97-6	trichlorophenol, 2,4,5-	95-95-4
molybdenum	7439-98-7	trichlorophenol, 2,4,6-	88-06-2
methyl tert-butyl ether [MTBE]	1634-04-4	trichlorophenol, 3,4,5-	609-19-8
methylphenol, 2-	95-48-7	toluene	108-88-3
methylphenol, 3-	108-39-4	uranium	7440-61-1
methylphenol, 4-	106-44-5	VPHw	NA
naphthalene	91-20-3	VHw6-10	NA
nickel	7440-02-0	xylenes, total	1330-20-7
phenanthrene	85-01-8	zinc	7440-66-6
phenol	108-95-2		

Substances evaluated in water for marine aquatic life water use:

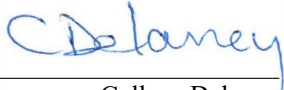
To meet numerical standards prescribed for defining whether a site is contaminated:

acenaphthene	83-32-9	arsenic	7440-38-2
anthracene	120-12-7	benzene	71-43-2
acridine	260-94-6	benz(a)anthracene	56-55-3
antimony	7440-36-0	benzo(a)pyrene	50-32-8

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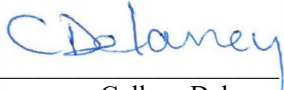
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barium	7440-39-3	methylphenol, 3-	108-39-4
beryllium	7440-41-7	methylphenol, 4-	106-44-5
boron	7440-42-8	naphthalene	91-20-3
cadmium	7440-43-9	nickel	7440-02-0
chromium	7440-47-3	phenanthrene	85-01-8
chrysene	218-01-9	phenol	108-95-2
cobalt	7440-48-4	pentachlorophenol [PCP]	87-86-5
copper	7440-50-8	pyrene	129-00-0
carbon tetrachloride	56-23-5	propylene glycol, 1,2-	57-55-6
chlorobenzene	108-90-7	quinoline	91-22-5
chloroform	67-66-3	selenium	7782-49-2
chlorophenol, 2-	95-57-8	silver	7440-22-4
chlorophenol, 3-	108-43-0	styrene	100-42-5
chlorophenol, 4-	106-48-9	thallium	7440-28-0
dichlorobenzene, 1,2-	95-50-1	titanium	7440-32-6
dichlorobenzene, 1,3-	541-73-1	tetrachloroethylene	127-18-4
dichlorobenzene, 1,4-	106-46-7	tetrachlorophenol, 2,3,4,5-	4901-51-3
dichloroethane, 1,2-	107-06-2	tetrachlorophenol, 2,3,4,6-	58-90-2
dichloromethane	75-09-2	tetrachlorophenol, 2,3,5,6-	935-95-5
dichlorophenol, 2,3-	576-24-9	trichloroethylene	127-18-4
dichlorophenol, 2,6-	87-65-0	trichlorobenzene, 1,2,4-	120-82-1
dichlorophenol, 3,4-	95-77-2	trichlorophenol, 2,3,4-	15950-66-0
dichlorophenol, 3,5-	591-35-5	trichlorophenol, 2,3,5-	933-78-8
ethylbenzene	100-41-4	trichlorophenol, 2,3,6-	933-75-5
EPHw10-19	NA	trichlorophenol, 2,4,5-	95-95-4
ethylene glycol	107-21-1	trichlorophenol, 2,4,6-	88-06-2
fluoranthene	206-44-0	trichlorophenol, 3,4,5-	609-19-8
fluorene	86-73-7	toluene	108-88-3
lead	7439-92-1	uranium	7440-61-1
LEPHw	NA	VPHw	NA
mercury	7439-97-6	VHw6-10	NA
molybdenum	7439-98-7	xylenes, total	1330-20-7
methyl tert-butyl ether [MTBE]	1634-04-4	zinc	7440-66-6
methylphenol, 2-	95-48-7		

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Substances evaluated in water for drinking water use:

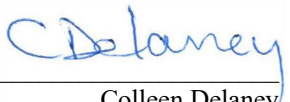
To meet numerical standards prescribed for defining whether a site is contaminated:

acenaphthene	83-32-9	dichloroethane, 1,2-	107-06-2
acetone	67-64-1	dichloroethane, 1,1-	75-34-3
aluminum	7429-90-5	dichloroethane, 1,2-	107-06-2
anthracene	120-12-7	dichloroethylene, 1,1-	75-35-4
antimony	7440-36-0	dichloroethylene, 1,2-cis-	156-59-2
arsenic	7440-38-2	dichloroethylene, 1,2-trans-	156-60-5
benzene	71-43-2	dichloromethane	75-09-2
benz(a)anthracene	56-55-3	dichloropropane, 1,2-	78-87-5
	205-99-2 &		
benzo(b+j)fluoranthenes	205-82-3	dichloropropane, 1,3-	142-28-9
benzo(a)pyrene	50-32-8	dichloropropene, 1,3- (cis+trans)	542-75-6
barium	7440-39-3	dimethylphenol, 2,4-	105-67-9
beryllium	7440-41-7	ethylbenzene	100-41-4
boron	7440-42-8	EPHw10-19	NA
bromodichloromethane [BDCM]	75-27-4	ethylene glycol	107-21-1
bromoform	75-25-2	fluoranthene	206-44-0
bromomethane	74-83-9	fluorene	86-73-7
butadiene, 1,3-	106-99-0	isopropylbenzene	98-82-8
cadmium	7440-43-9	lead	7439-92-1
chromium	7440-47-3	lithium	7439-93-2
cobalt	7440-48-4	LEPHw	NA
carbon tetrachloride	56-23-5	mercury	7439-97-6
chloroform	67-66-3	molybdenum	7439-98-7
chlorophenol, 2-	95-57-8	methyl ethyl ketone [MEK]	78-93-3
chrysene	218-01-9	methyl tert-butyl ether [MTBE]	1634-04-4
copper	7440-50-8	methylphenol, 2-	95-48-7
chlorobenzene	108-90-7	methylphenol, 3-	108-39-4
dibenz(a,h)anthracene	53-70-3	methylphenol, 4-	106-44-5
dibromochloromethane [DBCM]	124-48-1	naphthalene	91-20-3
dibromoethane, 1,2-	106-93-4	nickel	7440-02-0
dichlorobenzene, 1,2-	95-50-1	phenanthrene	85-01-8
dichlorobenzene, 1,3-	541-73-1	phenol	108-95-2
dichlorobenzene, 1,4-	106-46-7	pentachlorophenol [PCP]	87-86-5

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pyrene	129-00-0	tetrachlorophenol, 2,3,4,6-	58-90-2
propylene glycol, 1,2-	57-55-6	trichlorobenzene, 1,2,4-	120-82-1
propylbenzene, 1-	103-65-1	trichlorophenol, 2,4,5-	95-95-4
quinoline	91-22-5	trichlorophenol, 2,4,6-	88-06-2
selenium	7782-49-2	triethylene glycol	112-27-6
silver	7440-22-4	trimethylbenzene, 1,3,5-	108-67-8
sodium ion	17341-25-5	tin	7440-31-5
strontium	7440-24-6	tungsten	7440-33-7
styrene	100-42-5	toluene	108-88-3
thallium	7440-28-0	uranium	7440-61-1
titanium	7440-32-6	vanadium	7440-62-2
tetrachloroethane, 1,1,1,2-	630-20-6	VPHw	NA
tetrachloroethane, 1,1,2,2-	79-34-5	VHw6-10	NA
tetrachloroethylene	127-18-4	xylenes, total	1330-20-7
trichloroethane, 1,1,1-	71-55-6	zinc	7440-66-6
trichloroethane, 1,1,2-	79-00-5		
trichloroethylene	79-01-6		
trichlorofluoromethane	75-69-4		

To meet local background concentrations:

cobalt	7440-48-4	chromium	7440-47-3
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Schedule D

Documents

Summary of Site Condition, 2660 Simpson Road, Richmond, BC, prepared by Active Earth Engineering Ltd., dated May 2023;

Stage 1 Update Preliminary Site Investigation, 2660 Simpson Road, Richmond, BC, prepared by Active Earth Engineering Ltd., dated April 2023;

Stage 2 Preliminary Site Investigation, 2660 Simpson Road, Richmond, BC, prepared by Active Earth Engineering Ltd., dated July 2023;

Phase 1 Environmental Site Assessment, 2660 Simpson Road, Richmond, BC, prepared by Next Environmental, dated February 18, 2022.

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