ENGINEERING EVALUATION/COST ANALYSIS
GEDDES BROOK INTERIM REMEDIAL MEASURE

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SECTION 1

INTRODUCTION

1.1 PURPOSE

In 2002, Honeywell International, Inc. and the New York State Department of Environmental Conservation (NYSDEC) entered into an Order on Consent (Index #D7-0003-01-09) to conduct an Interim Remedial Measure (IRM) for Geddes Brook. The IRM objectives, as presented in the Consent Order, are to:

- eliminate, to the extent practicable, within the scope of this IRM, the transport of mercury into Ninemile Creek from Geddes Brook sediments and floodplain soils;
- eliminate, to the extent practicable, within the scope of this IRM, potential impacts to human health and fish and wildlife resources associated with Geddes Brook sediments and floodplain soils; and
- determine the nature and extent of contamination in the Ninemile Creek Floodplain Sampling Area.

The IRM scope included in the Consent Order called for full bank-to-bank sediment removal within the Geddes Brook channel from the confluence with the West Flume to the confluence with Ninemile Creek (estimated at 4,200 CY), including sediment within the Geddes Brook culverts. The IRM scope also included addressing floodplain soil/sediment with specific cleanup levels to be determined. The IRM scope was based on remediating the channel in-place and maintaining its current configuration. The IRM scope also identified an area of concern in the floodplain of approximately 3.5 acres, with that area to be refined based on the outcome of additional sampling.

Pursuant to the Consent Order, an IRM Work Plan for Geddes Brook (Parsons, 2002) was prepared, and subsequently approved by NYSDEC on April 24, 2003. The IRM Work Plan included pre-design investigation sampling to assess the extent of mercury in channel sediment and floodplain soil/sediment.

The pre-design investigation sampling was completed in 2002, with the results presented in the *Preliminary (50%) Design Report for the Geddes Brook Site* (Parsons, 2003). The results of the pre-design investigation sampling were subsequently summarized with other available data for Geddes Brook and its floodplain in the *Final Draft Geddes Brook/Ninemile Creek Feasibility Study Report* (Parsons, 2005) (FS). The FS evaluated a variety of channel and floodplain alternatives for the Geddes Brook/Ninemile Creek site. Since submittal of the FS, a number of supplemental site investigations and assessments were conducted, including an analysis of site

topography and features, additional chemical data collection and analysis, and an evaluation of habitat and fluvial geomorphic conditions. These assessments resulted in a better understanding of site conditions, the identification of opportunities for tailoring the remedy to site-specific features, and further development of synergies between site remediation and habitat enhancement opportunities.

This Engineering Evaluation/Cost Analysis (EE/CA) for implementing the Geddes Brook IRM has been prepared pursuant to the Consent Order and IRM Workplan, and in accordance with the USEPA document "Guidance on Conducting Non-Time Critical Removal Actions under CERCLA" (USEPA, 1993). This EE/CA:

- presents a Streamlined Risk Evaluation (SRE) which supports the basis for the IRM;
- presents and evaluates soil/sediment management alternatives; and
- recommends a soil/sediment management Response Action.

1.2 SITE DESCRIPTION

Geddes Brook is located in Onondaga County, New York on the southwest side of Onondaga Lake. Geddes Brook originates in the town of Camillus and flows approximately 3 miles northeast to its confluence with the West Flume, and then an additional 1,600 ft to Ninemile Creek. The area subject to the IRM consists of lower Geddes Brook, which is located downstream of the confluence with the West Flume, and the adjacent floodplain, as shown on Figure 1-1.

Lower Geddes Brook receives surface water inflow from the West Flume and from an unnamed tributary that conveys storm water from the west. Before entering Geddes Brook, the West Flume flows through the former Linden Chemicals and Plastics (LCP) Bridge Street facility, which produced chlor-alkali products and was the subject of a separate remedial action. Geddes Brook also receives surface discharge from numerous sources, including residential neighborhoods and road runoff. The State of New York has classified the lower reaches of Geddes Brook as Class C water (best usage is fishing; water is suitable for fish survival and propagation) and the upper reaches above the abandoned Erie Canal as Class C (T) (best usage is fishing; water is suitable for cold water fish species survival and propagation).

A primary source of mercury to Geddes Brook was the former LCP Bridge Street facility via the West Flume (TAMS, 2003a). Remedial construction was completed at Operable Unit 1 (OU-1) of the LCP Bridge Street site (LCP OU-1) in 2007. The remedial construction included the excavation of approximately 132,600 cy of soil and sediment from site upland and wetland areas, including 22,500 cy from the West Flume. The excavated material was placed in an on-site containment system, designed specifically to accommodate the LCP-related materials, and also with the flexibility to allow for the consolidation of materials from the Geddes Brook/Ninemile

Creek site. Following the excavations, the LCP OU-1 site, including associated wetlands and the West Flume, was restored.

1.3 SITE CHARACTERIZATION

Geddes Brook has been investigated as part of a comprehensive Remedial Investigation/Feasibility Study and pursuant to the IRM Order on Consent. Initial investigations were described in the *Final Draft Geddes Brook/Ninemile Creek Remedial Investigation Report* (TAMS, 2003a). Pursuant to the Consent Order, pre-design investigation sampling was conducted in 2002 to assess the extent of mercury in channel and floodplain soil/sediment. The results of this sampling were presented in the *Preliminary (50%) Design Report for the Geddes Brook Site* (Parsons, 2003). The results of the pre-design investigation sampling were subsequently summarized with other available data for Geddes Brook and its floodplain in the *Final Draft Geddes Brook/Ninemile Creek Feasibility Study Report* (Parsons, 2005) (FS). The FS evaluated a variety of channel and floodplain alternatives for the Geddes Brook/Ninemile Creek site.

Subsequent to the submittal of the FS, supplemental field investigations and evaluations were conducted in 2007 to gather additional data to advance remedy development and evaluation at the site. The data resulting from these investigations are presented in the *Geddes Brook/Ninemile Creek Operable Unit 1 Supplemental Feasibility Study Report* (Parsons, 2008) (Supplemental FS). Figure 1-2 illustrates soil/sediment data for mercury samples collected from the Geddes Brook channel and floodplain during the 2007 and earlier investigations. A summary of data pertaining to other Chemical Parameters of Interest (CPOIs) is presented in the FS and the Supplemental FS.

In addition to providing chemical analytical data, implementation of the 2007 supplemental site investigations provided a better understanding of site conditions that could be incorporated into the IRM, including:

- Groundwater is generally 1-2 ft below grade in the Geddes Brook floodplain.
- Clay appears to underlie the entire Geddes Brook floodplain.
- Along significant portions of Geddes Brook, a defined break in grade is present, which is generally consistent with the 370 contour. This break in grade has been established as the remedial site boundary, as shown in Figure 2-3 of the Supplemental FS.
- Re-alignment of Geddes Brook would provide opportunities to increase sinuosity, connectivity with the floodplain, and provide a buffer from State Fair Landfill.

- Decreasing the surface elevation of the Geddes Brook floodplain may foster development of an improved emergent wetland community and assist with the control of invasive species.
- Geddes Brook should be allowed to meander, where feasible.
- Opportunities exist to improve substrate conditions for benthic and fish communities in Geddes Brook.

1.4 STREAMLINED RISK EVALUATION

A Streamlined Risk Assessment (SRE) was conducted to support the EE/CA, and is included in Appendix A. In general, the SRE concluded that response actions are warranted to meet the IRM objectives.

SECTION 2

IDENTIFICATION AND EVALUATION OF IRM RESPONSE ACTIONS

2.1 OVERVIEW

Remedial alternatives and alternatives for the management of removed soil/sediment for the Geddes Brook portion of the Geddes Brook/Ninemile Creek site were presented and evaluated in detail in the FS and the Supplemental FS. ARARs for the IRM are the same as those presented for the Operable Unit 1 remedy in the Supplemental FS.

2.2 REMEDIATION OF GEDDES BROOK CHANNEL AND FLOODPLAIN

The IRM includes full bank-to-bank removal of channel sediments to the underlying clay (estimated to be 4,700 cubic yards) from the confluence of Geddes Brook with the West Flume to its confluence with Ninemile Creek, including any sediment within the Geddes Brook culverts. Floodplain soil/sediment will be removed vertically to the underlying clay layer that is typically 2 to 4 ft below ground surface, and horizontally to a break in grade that bounds the floodplain (estimated to be 63,000 cubic yards). Following removal, approximately 1 ft of vegetated cover will be placed in areas where soil/sediment had been removed, resulting in a lower overall elevation with the intent to establish an emergent wetland. In addition, the Geddes Brook channel will be relocated west downstream of the culverts to provide improved sinuosity, increased length, better connectivity with the floodplain, ability for channel migration, and an increased buffer from the State Fair landfill.

This alternative is consistent with Alternative 3 of the Supplemental FS and is summarized on Figure 2-1.

2.3 SOIL/SEDIMENT MANAGEMENT ALTERNATIVES

The FS and Supplemental FS presented two alternatives for the management of removed soil/sediment:

Alternative D-1 – Consolidation at LCP Bridge Street Site: This alternative would consist of placing removed channel sediment and floodplain soil/sediment within a containment system designed and constructed for site-related materials. For purposes of the Supplemental FS and this EE/CA, consolidation is assumed to occur at the containment system designed for OU-1 of the LCP Bridge Street site; during IRM design, the lake sediment consolidation area (SCA) would also be evaluated. Construction of the LCP OU-1 containment system is complete, and consists of a barrier wall around the facility to contain site-impacted shallow and deep groundwater and a groundwater

extraction and treatment system. The LCP OU-1 containment system was designed with the flexibility to accommodate soil/sediment from the Geddes Brook/Ninemile Creek site. To implement Alternative D-1, material from the Geddes Brook/Ninemile Creek site would be placed within the containment system and covered with the low permeability cap that has been designed for the site.

Alternative D-2 – Removal to a New York State Commercial Facility Offsite: This alternative would consist of disposing removed channel sediment and floodplain soil/sediment at a commercial landfill facility within New York State, such as the High Acres Landfill (High Acres) or the Ontario County Landfill, both of which are near Rochester, New York.

These alternatives were evaluated in detail in the FS; this evaluation was updated in the Supplemental FS. A summary of the evaluation is presented below:

Effectiveness:

Consolidation of removed materials within the LCP Bridge Street site containment system under Alternative D-1 would be protective of human health and the environment by effectively containing excavated channel sediment and floodplain soil/sediment beneath a low-permeability cap. Containment would reduce or eliminate the potential exposure risk to human and ecological receptors. The ROD issued by NYSDEC for the LCP Bridge Street site (NYSDEC, 2000) determined that the LCP Bridge Street site containment system would provide overall protectiveness of human health and the environment. This containment system has been designed and constructed specifically to accumulate LCP-related materials, such as those present at the Geddes Brook/Ninemile Creek site.

Consolidation of removed materials at an approved commercial facility under Alternative D-2 would also be protective of human health and the environment by effectively containing materials under a low-permeability cap. Containment would reduce or eliminate the potential exposure risks to human and ecological receptors.

One difference between the two alternatives is that the transport route to the LCP Bridge Street site under Alternative D-1 would be 2.5 miles or less along non-residential roads, versus 80 miles under Alternative D-2. Associated with the transport of materials is the risk of an accident during transit; the potential for transportation-related fatalities during implementation was evaluated in the FS. The FS concluded that Alternative D-1 would have a lower risk of vehicular accidents and increased public safety due to shorter material transport distance to the LCP OU-1 containment system. The lower risk is roughly proportional to the distances traveled (2.5 miles for consolidation at the LCP OU-1 site under Alternative D-1, compared to 80 miles for consolidation at a Rochester

area commercial facility under Alternative D-2). The FS also concluded, however, that no unacceptable short-term risks to human health and the environment would be presented by either of the alternatives.

The analysis of environmental impact is largely focused on protectiveness (risk to human health and the environment) of the remedy, and both alternatives are protective. A further analysis of sustainability, including energy use and carbon footprint, also favors the shorter transportation route.

Implementability:

Alternative D-1 is implementable both technically and administratively. The LCP Bridge Street site is located within 2.5 miles of the Geddes Brook/Ninemile Creek site and is easily accessible via non-residential roads suitable for truck traffic. Material consolidation and containment are routinely applied remedial strategies. Flexibility has been built into the design of the LCP Bridge Street OU-1 site containment system to allow for consolidation of materials from the Geddes Brook/Ninemile Creek site; similar materials from the West Flume and adjoining wetlands have already been successfully consolidated at this location.

Alternative D-2 is implementable both technically and administratively for the High Acres facility, which is located approximately 80 miles from Geddes Brook/Ninemile Creek and accessible via non-residential roads suitable for truck traffic.

Cost:

Material management costs are presented in detail in the Supplemental FS and are summarized in Table 2-1.

SECTION 3

RECOMMENDED RESPONSE ACTION

Consistent with the FS and the Supplemental FS, the recommended Response Action includes consolidation of removed soil/sediment at the LCP Bridge Street site. Consolidation at the LCP Bridge Street site, which was specially designed and constructed to manage LCP-related soil/sediment such as that from the Geddes Brook/Ninemile Creek site, is cost effective, represents a more sustainable approach than disposal at a more distant facility, would have a lower risk of vehicular accidents and increased public safety when compared to disposal at a more distant facility, and would be long-term protective of human health and the environment. During IRM design, the potential placement of the soil/sediment materials at the lake sediment consolidation area (SCA) would also be evaluated.

SECTION 4

REFERENCES

NYSDEC. 2000. Record of Decision, Site Number 7-34-049 LCP Bridge Street Site, Sub-Site to the Onondaga Lake NPL Site. New York State Department of Environmental Conservation, September 29, 2000.

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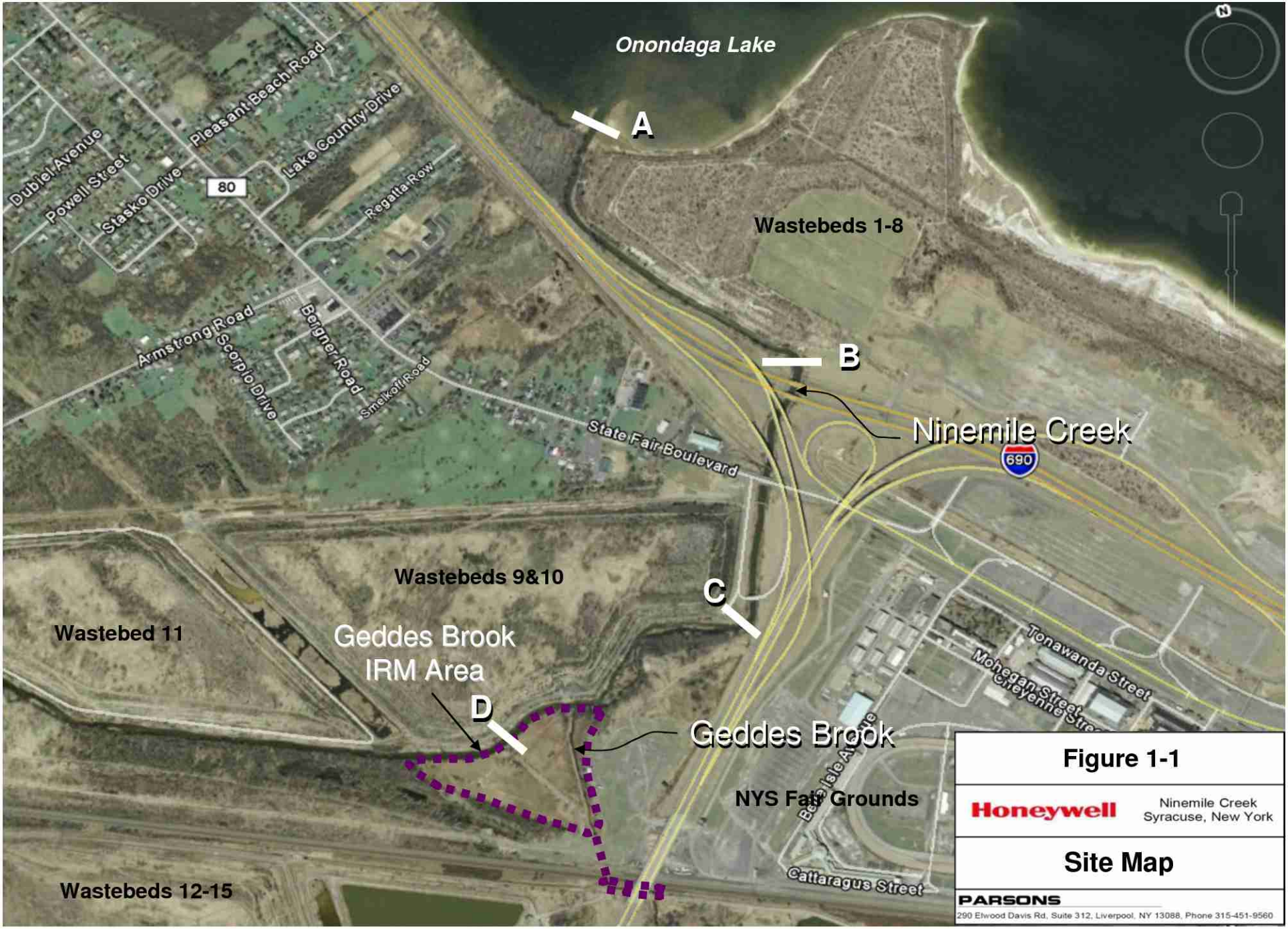
Table 2-1
Geddes Brook IRM Cost Summary[1]

Material Management at LCP Bridge Street Site		
	Capital Costs[2]	$8,900,000
	Material Management Costs	$3,600,000
	Present Worth O&M costs	$700,000
	Total Present Worth Costs	$13,200,000
Material Management at Off-site Commercial Facility		
	Capital Costs[2]	$8,900,000
	Material Management Costs	$11,600,000
	Present Worth O&M costs	$700,000
	Total Present Worth Costs	$21,200,000

Notes:

(1) From Geddes Brook / Ninemile Creek Supplemental Feasibility Study (Parsons, 2008). Feasibility Study level accuracy (+50% / -30%).

(2) Total capital costs included the following markups; 18% indirect construction costs, 20% contingency, and 17% engineering, design and construction oversight.


Onondaga Lake
A
B
C
D
Wastebeds 1-8
Wastebeds 9&10
Wastebed 11
Wastebeds 12-15
Geddes Brook
IRM Area
Geddes Brook
Ninemile Creek
NYS Fair Grounds
State Fair Boulevard
Pleasant Beach Road
Lake Country Drive
Regatta Row
Dubiel Avenue
Powell Street
Stasko Drive
80
Armstrong Road
Scorpio Drive
Beigner Road
Smelkoff Road
690
Tonawanda Street
Mohegan Street
Cheyenne Street
Cattaragus Street
Figure 1-1
Honeywell
Ninemile Creek
Syracuse, New York
Site Map
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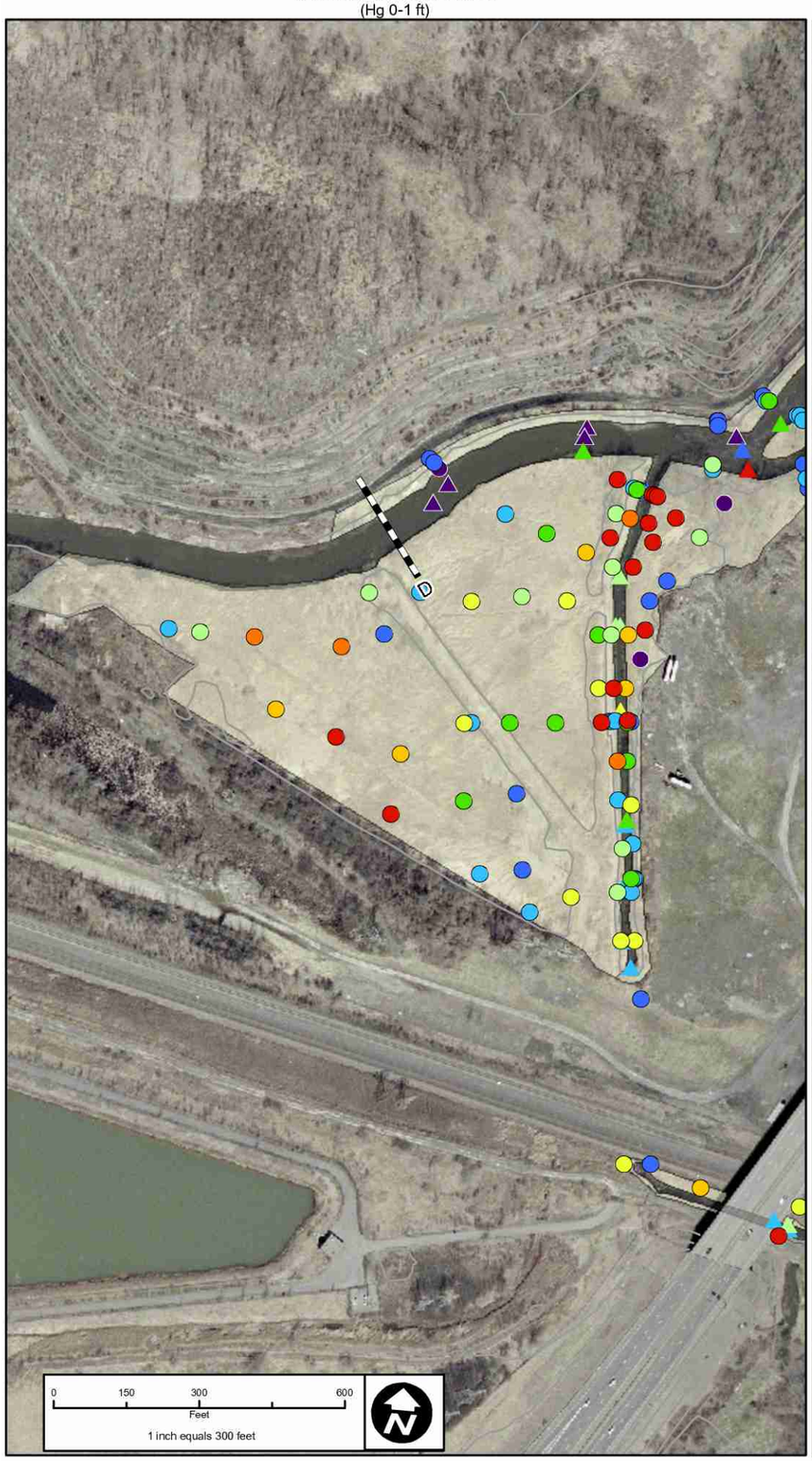
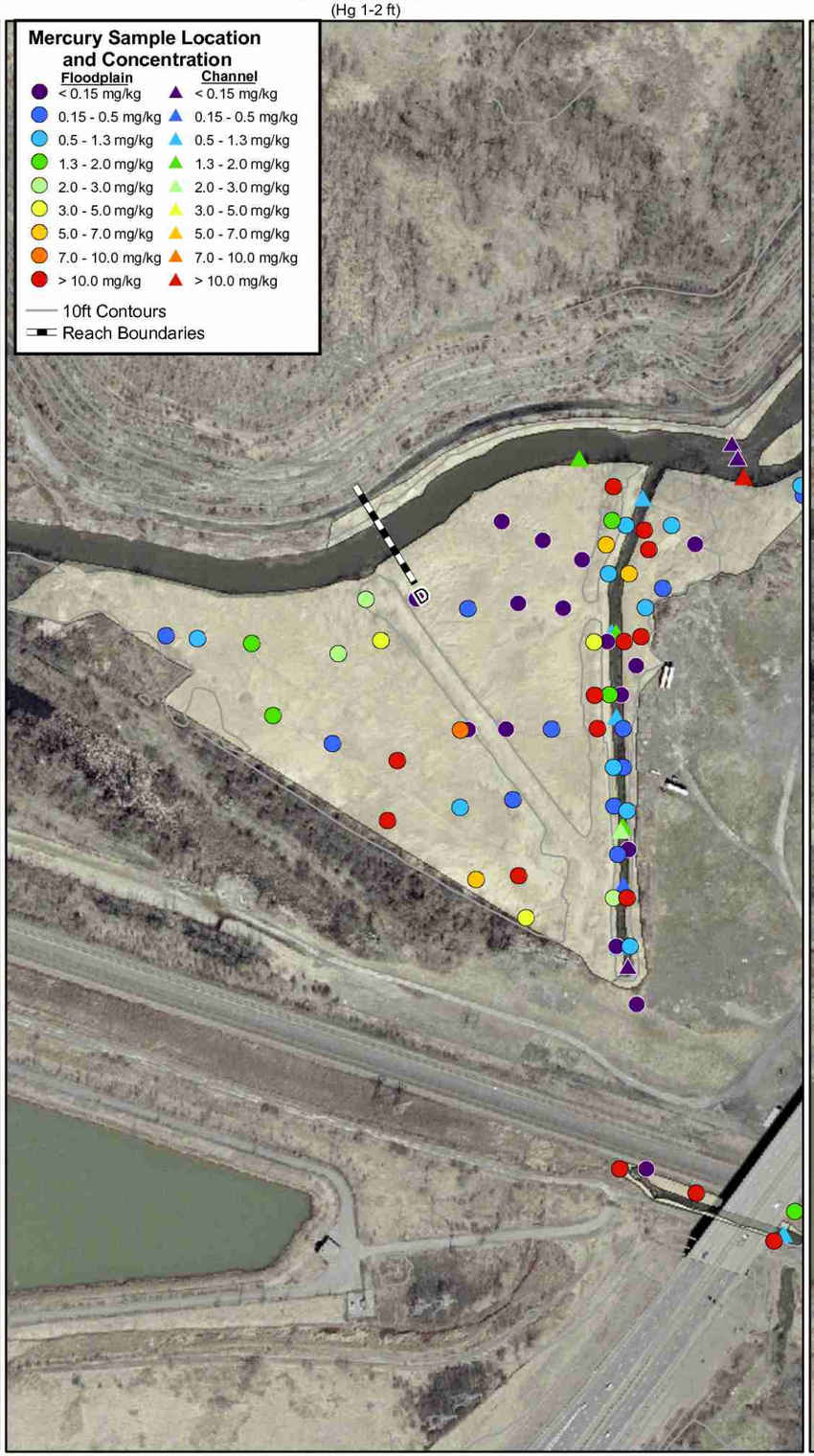
Reach CD and Geddes Brook
(Hg 0-1 ft)



Reach CD and Geddes Brook
(Hg 1-2 ft)



Reach CD and Geddes Brook
(Hg 2-3 ft)

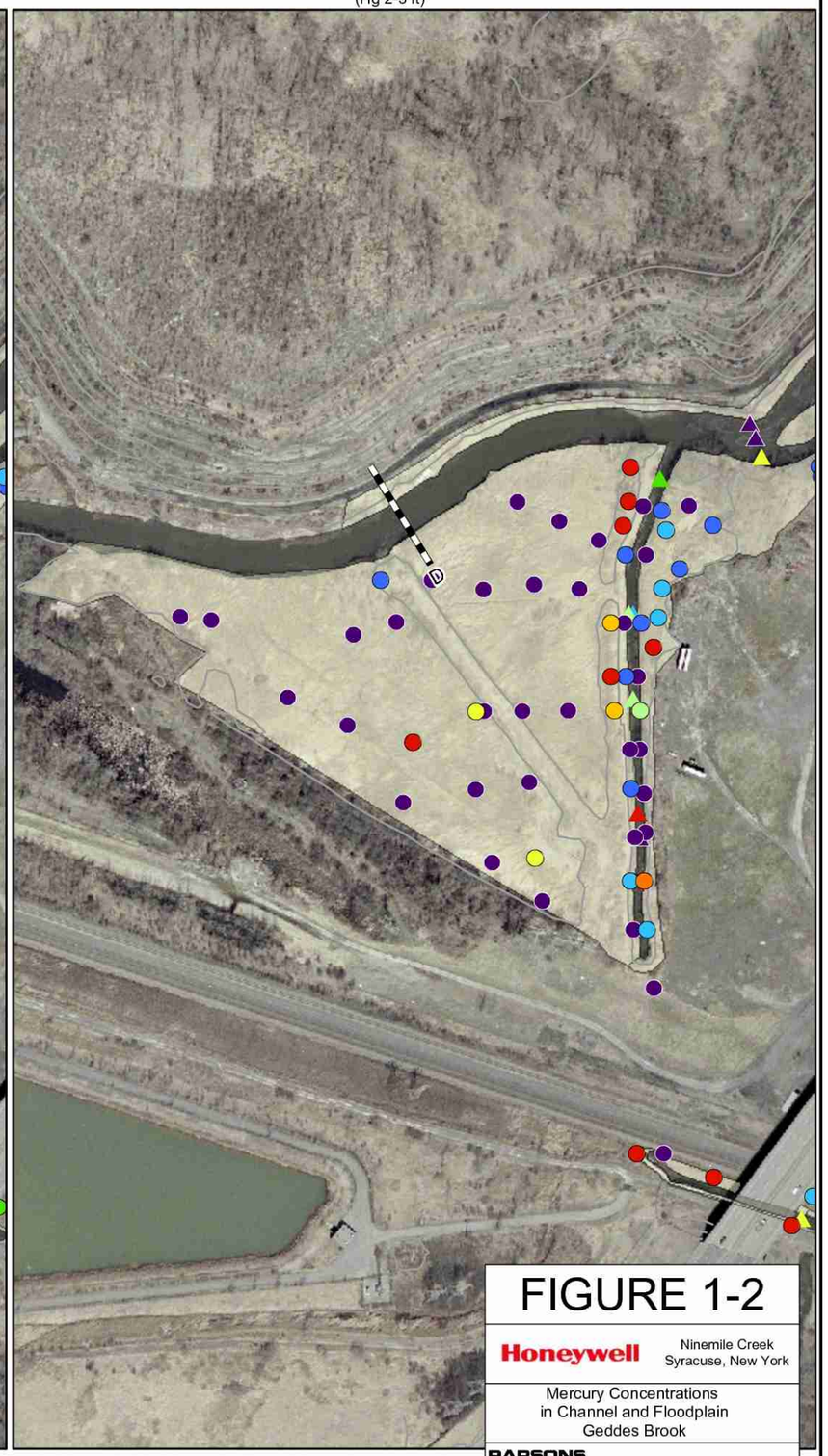


FIGURE 1-2

Honeywell

Ninemile Creek
Syracuse, New York

Mercury Concentrations
in Channel and Floodplain
Geddes Brook

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Remove Soil/Sediment to Clay and Restore with Approximately 1 ft of Clean Soil.
Inactive Utility Berm
D
Remove Sediment from Existing Channel Consistent with Geddes Brook IRM. Restore as Wetland.
State Fair Landfill
Break In Grade
Relocate Channel as Shown to Enhance Sinuosity, Connectivity, and Ability to Migrate.
Remove Sediment from Geddes Brook Culverts
Remove Soil/Sediment from Existing Channel and Floodplain. Restore with Clean Soil to Existing Grade.
0
300
600
Feet
1 inch equals 300 feet
N
Figure 2-1
Honeywell
Ninemile Creek
Syracuse, New York
IRM Summary
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APPENDIX A

STREAMLINED RISK EVALUATION

GEDDES BROOK EE/CA

APPENDIX A
STREAMLINED RISK EVALUATION

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Table A-3 Floodplain Analytical Results for Mercury in Geddes Brook (0-15 cm)- 1998

Table A-4 Mercury Concentrations in Geddes Brook Sediment Samples- 2001

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Attachment 1 – Risk Summary Tables from HHRA and BERA

APPENDIX A

STREAMLINED RISK EVALUATION

A.1 INTRODUCTION AND OBJECTIVE

This appendix presents the results of the Streamlined Risk Evaluation (SRE) which was prepared for the Geddes Brook portion of the Geddes Brook/Ninemile site. The SRE was prepared in accordance with the Interim Remedial Measure (IRM) Work Plan to determine if the proposed remedial action for channel sediment and floodplain soil/sediment at the site is warranted. The objective of an SRE is to provide a concise evaluation of potential risks to human and ecological receptors, assuming no removal or clean-up actions are taken at a site. While the SRE may indicate risks associated with Geddes Brook sediment and soil, it should be noted that the approach is by definition conservative, and employs maximum contaminant concentrations and conservative screening benchmarks.

A.2 APPROACH TO THE STREAMLINED RISK EVALUATION

The Geddes Brook SRE consisted of screening mercury concentrations in channel sediment and floodplain soil/sediment against sediment and soil benchmarks, and includes, by reference, the results of the Baseline Ecological Risk Assessment (BERA; TAMS, 2003c) and the Human Health Risk Assessment (HHRA; TAMS, 2003b) for Geddes Brook / Ninemile Creek. Sediment and soil benchmarks used in the comparison are presented in Table B-1. These benchmarks are screening values and should not be construed as cleanup criteria. Exceedance of these benchmarks indicates potential risk and the need for further evaluation.

The mercury concentration data assessed in the evaluation are from investigations conducted in 1998, 2001, and 2002. More recent data were collected in 2007; however, screening of these data are considered unnecessary because the recent data are generally consistent with the previous data and, as discussed in Section B.5, the previous data are sufficient for concluding that an IRM is warranted.

Only mercury was assessed in this SRE because it is the primary contaminant of concern in Geddes Brook channel sediment and floodplain soil/sediment. The RI Report (TAMS, 2003a) concluded that other chemical parameters of interest (e.g., hexachlorobenzene, PCBs, polycyclic or polynuclear aromatic hydrocarbons (PAHs), and PCDD/PCDFs) were primarily associated with mercury-contaminated sediment and that they would be expected to have similar fate and transport as mercury. However, other chemicals could result in risks at locations where mercury results do not indicate such risks. For this reason, an analysis of each potentially applicable

chemical parameter of interest was conducted as part of the Feasibility Study (FS) for Geddes Brook / Ninemile Creek. The results of that analysis are presented in Section 2 of the 2005 FS Report for the Geddes Brook / Ninemile Creek Site (Parsons, 2005).

For evaluation of potential human health risks, concentrations of mercury in channel sediment and floodplain soil/sediment were compared with the conservative risk-based concentration derived by USEPA Region 9. This value is derived to be protective of cumulative exposure through three potential exposure routes: ingestion, inhalation of particles (in the case of inorganic mercury), and dermal contact (USEPA, 2003). The USEPA Region 9 value for mercury is 23 mg/kg (based on a hazard quotient of 1 for residential exposure (USEPA, 2003). It is derived assuming adults and children contact soil in a residential setting 350 days per year over 30 years. Because this scenario assumes more exposure than is expected to occur at the site, comparison to this value provides a protective means of evaluating site risks. No screening values for mercury were identified for protection of human health via bioaccumulation.

Sediment mercury data were compared to both NYSDEC sediment values and the USEPA Region 9 soil value because the USEPA Region 9 value was the only human health based value available. Floodplain soil/sediment data were compared to both of these values because floodplain soil/sediment can become flooded during periods of high flow.

For evaluation of potential ecological risks, mercury concentrations in channel sediment and floodplain soil/sediment were compared with screening values from the NYSDEC *Technical Guidance for Screening Contaminated Sediment* (NYSDEC, 1999) and from the State of Washington Department of Ecology (Washington State Department of Ecology, 2003).

A.3 SUMMARY OF SCREENING RESULTS

Screening results are presented in Tables A-2 to A-6. With respect to potential human health risk, the USEPA Region 9 soil value was not exceeded in channel sediment samples collected in 1998, but was exceeded at two locations from samples collected in 2001. The USEPA Region 9 value was not exceeded in floodplain sediment/soil samples collected in 1998, and was exceeded in less than 10% of the samples collected in 2001 and 2002.

With respect to potential ecological risk, the lowest effect level (LEL) was exceeded in all 2002 channel sediment samples, and the severe effects level (SEL) was exceeded in most 2002 samples. In floodplain soil/sediment, the NYSDEC LEL for mercury was exceeded in most samples while the NYSDEC SEL was exceeded in one sample collected in 1998 and in more than half of the samples collected in 2001 and 2002.

A.4 SUMMARY OF RESULTS OF THE HHRA AND BERA

Risks were further evaluated in the Geddes Brook / Ninemile Creek HHRA and BERA (TAMS, 2003c; and TAMS, 2003b, respectively).

The HHRA evaluated potential risks within upper and lower Geddes Brook and upper and lower Ninemile Creek. The risk summary tables (Tables 9.1 to 9.4 for the reasonable maximum exposure [RME]) are included in Attachment 1 to this appendix for reference. The greatest potential risk to human health was fish consumption, with PCBs and PCDD/PCDFs contributing the bulk of the cancer risk, and PCBs and methylmercury contributing the bulk of the non-cancer hazard. In lower Geddes Brook channel sediment and floodplain soil/sediment, reasonable maximum exposure (RME) cancer risk estimates exceeded one in 100,000 (10^{-5}) for older children. The RME cancer risk for adult receptors exceeded one in 100,000 for lower Geddes Brook floodplain soil/sediment. However, the central tendency (CT) cancer risk estimate was less than one in 1,000,000 for all pathways associated with Lower Geddes Brook channel sediment and floodplain soil/sediment.

The BERA did not evaluate potential risks for Geddes Brook separately from Ninemile Creek. However, contaminant concentrations in channel sediment and floodplain soil/sediment are similar between the two systems and, therefore, results of the BERA can be applied in a general sense to Geddes Brook. In addition to sediment toxicity to benthic macroinvertebrates, the BERA concluded that bioaccumulation of contaminants (particularly mercury) poses potential risk to ecological receptors via fish and insect consumption (TAMS, 2003c). The risk summary tables from the BERA (Tables ES-4 to ES-7) are included in Attachment 1 to this appendix for reference.

A.5 CONCLUSIONS

The SRE results indicate that there is a potential threat to human health and the environment at the site. Based on the following factors from 40 CFR Section 300.415 (B)(2), remedial action at the site is warranted:

- Potential threat of exposure to nearby human populations, animals, and the food chain from contaminants.
- Elevated levels of contaminants in soil/sediment at or near the surface with potential to migrate.
- Potential threat to public health, welfare, or the environment.

A.6 REFERENCES

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TABLES A-1 THROUGH A-6

Table A-1
Screening benchmarks for mercury in sediment and soil

Criteria	Units	Sediment	Soil
NYSDEC LEL (benthos)[a]	mg/kg dry	0.15	
NYSDEC SEL (benthos)[a]	mg/kg dry	1.3	
EPA Region 4 screening value[b]	mg/kg dry		0.1 (inorganic)[c]
EPA Region 9 residential [d]	mg/kg dry	23	23

Note: EPA - U.S. Environmental Protection Agency
LEL - lowest effect level
NYSDEC - New York State Department of Environmental Conservation
SEL - severe effect level

[a] NYSDEC (1999).

[b] U.S. EPA (1999).

[c] From ORNL, Efroymson et al. (1997a,b).

[d] U.S. EPA (2003).

Table A-2
Sediment analytical results for mercury in Geddes Brook—1998

Station	Date sampled	Sample ID	Sample depth (cm)	Mercury (mg/kg, dry)	Benchmark Exceeded: NYSDEC LEL (benthos)	Benchmark Exceeded: NYSDEC SEL (benthos)	Benchmark Exceeded: EPA Region 9 Residential
GB1	7/14/1998	SD0003	0–8	0.0838			
GB2	7/22/1998	SD0023	0–12	0.0615			
GB3	7/22/1998	SD0024	0–15	0.237	✓		
		SD0025	15–45	0.323	✓		
		SD0026	45–75	0.264	✓		
		SD0027	75–83	0.113			
GB6	7/23/1998	SD0037	0–15	1.093	✓		
		SD0038	15–37	0.51	✓		
		SD0038 (rep.)	15–37	0.442	✓		
GB7	7/23/1998	SD0033	0–15	3.432	✓	✓	
		SD0034	15–45	1.282	✓		
		SD0035	45–75	1.99	✓	✓	
		SD0036	75–82	3.761	✓	✓	
GB8	7/23/1998	SD0029	0–15	0.405	✓		
		SD0030	15–45	1.156	✓		
		SD0030 (rep.)	15–45	1.115	✓		
		SD0031	45–71	1.998	✓	✓	

Note:
EPA - U.S. Environmental Protection Agency
LEL - lowest effect level
NYSDEC - New York State Department of Environmental Conservation
SEL - severe effect level

Table A-3
Floodplain analytical results for mercury in Geddes Brook (0–15 cm)—1998

Station	Date Sampled	Sample ID	Distance from water's edge	Mercury (mg/kg)	Benchmark Exceeded: NYSDEC LEL (benthos)	NYSDEC SEL (benthos)	EPA Region 4 Screening	EPA Region 9 Residential
GB1	7/14/1998	FS0004	1.44	0.153	✓		✓	
		FS0005	0.76	0.149			✓	
		FS0006	0.00	0.0875				
GB2	7/14/1998	FS0007	2.40	0.177	✓		✓	
		FS0008	1.20	0.108			✓	
		FS0009	0.00	0.0669				
GB6	7/23/1998	FS0022	2.60	0.995	✓		✓	
		FS0023	1.30	0.865	✓		✓	
		FS0023 (rep.)	1.30	0.791	✓		✓	
		FS0024	0.00	1.595	✓	✓	✓	

Note: EPA - U.S. Environmental Protection Agency
LEL - lowest effect level
NYSDEC - New York State Department of Environmental Conservation
SEL - severe effect level

Table A-4
Mercury concentrations in Geddes Brook sediment samples—2001

Station	Sampling Date	Sample Number	Depth Interval (cm)	Total Mercury (mg/kg dry weight)	Benchmark Exceeded: NYSDEC LEL (benthos)	Benchmark Exceeded: NYSDEC SEL (benthos)	Benchmark Exceeded: EPA Region 9 Residential
GBCULVT1	03/19/01	GB-CULVERT-1	0–18	0.86 *J*	✓		
MN-3	04/17/01	MN-3A	0–15	1.00	✓		
		MN-3B	15–43	1.30	✓		
TG-1-1	03/19/01	TG-1-1A	0–15	2.3 *J*	✓	✓	
		TG-1-1B	15–45	1.2 *J*	✓		
		TG-1-DUP	15–45	1.1	✓		
		TG-1-1C	45–75	2.5 *J*	✓	✓	
		TG-1-1D	75–105	1.0 *J*	✓		
TG-1-2	03/19/01	TG-1-2A	0–15	2.5 *J*	✓	✓	
		TG-1-2B	15–45	1.8 *J*	✓	✓	
		TG-1-2C	45–75	0.74 *J*	✓		
		TG-1-2D	75–105	3.0 *J*	✓	✓	
		TG-1-2E	105–136	7.3 *J*	✓	✓	
TG-2-1	03/19/01	TG-2-1A	0–15	0.9 *J*	✓		
		TG-2-1B	15–45	2.5 *J*	✓	✓	
		TG-2-1C	45–71	10.3 *J*	✓	✓	
TG-2-2	03/19/01	TG-2-2A	0–15	1.6 *J*	✓	✓	
		TG-2-2B	15–37	1.6 *J*	✓	✓	
TG-3-1	03/22/01	TG-3-1A	0–15	1.1	✓		
		TG-3-1B	15–28	1.8	✓	✓	
TG-3-2		TG-3-2A	0–15	15.7	✓	✓	
		TG-3-2B	15–45	5.3	✓	✓	
		TG-3-2C	45–73	32.3 *J*	✓	✓	✓
		TG-3-DUP	45–73	79 *J*	✓	✓	✓
TG-4-1	03/22/01	TG-4-1A	0–15	1.09	✓		
		TG-4-1B	15–45	0.89	✓		
		TG-4-1C	45–75	4.6	✓	✓	
		TG-4-1D	75–105	3.4	✓	✓	
		TG-4-1E	105–128	10.4	✓	✓	
TG-4-2	03/22/01	TG-4-2A	0–15	2.1	✓	✓	
TG-5-1	03/22/01	TG-5-1A	0–15	0.190	✓		
		TG-5-1B	15–45	0.230	✓		
		TG-5-1C	45–75	0.290	✓		
		TG-5-1D	75–88	0.420	✓		
TG-5-2	03/22/01	TG-5-2A	0–15	0.360	✓		
		TG-5-2B	15–45	0.306	✓		
		TG-5-2C	45–75	0.360	✓		
		TG-5-DUP	45–75	0.370	✓		
		TG-5-2D	75–101	0.260	✓		
TG-5-3	03/21/01	TG-5-3A	0–15	0.170	✓		
		TG-5-3B	15–45	0.210	✓		
		TG-5-3C	45–56	0.210	✓		

Note: EPA - U.S. Environmental Protection Agency
J - value qualified as estimated
LEL - lowest effect level
NYSDEC - New York State Department of Environmental Conservation
SEL - severe effect level

Table A-5
Mercury concentrations in Geddes Brook floodplain soil samples—2001

Station	Date Sampled	Sample ID	Sample Depth (cm)	Total mercury (mg/kg dry)	Benchmark Exceeded: NYSDEC LEL (benthos)	NYSDEC SEL (benthos)	EPA Region 4 Screening	EPA Region 9 Residential
FG-1-1	3/6/2001	FG-1-1A	0–15	1.5	✓	✓	✓	
		FG-1-1B	15–30	0.13			✓	
FG-1-2	3/6/2001	FG-1-2A	0–15	2.8	✓	✓	✓	
		FG-1-2B	15–30	0.49	✓		✓	
FG-1-3	3/6/2001	FG-1-3A	0–15	1.5	✓	✓	✓	
		FG-1-3B	15–30	0.30	✓		✓	
FG-1-4	3/6/2001	FG-1-4A	0–15	13.8	✓	✓	✓	
		FG-1-4B	15–30	31.9	✓	✓	✓	✓
FG-1-5	3/6/2001	FG-1-5A	0–15	13.6	✓	✓	✓	
		FG-1-5B	15–30	33.7	✓	✓	✓	✓
FG-1-6	3/6/2001	FG-1-6A	0–15	14.1	✓	✓	✓	
		FG-1-6B	15–30	31.4	✓	✓	✓	✓
FG-2-1	3/6/2001	FG-2-1A	0–15	1.4	✓	✓	✓	
		FG-2-1B	15–30	0.16	✓		✓	
FG-2-2	3/6/2001	FG-2-2A	0–15	2.3	✓	✓	✓	
		FG-2-DUP	0–15	1.8	✓	✓	✓	
		FG-2-2B	15–30	0.12			✓	
FG-2-3	3/6/2001	FG-2-3A	0–15	0.88	✓		✓	
		FG-2-3B	15–30	0.32	✓		✓	
FG-2-4		FG-2-4A	0–15	10.7	✓	✓	✓	
		FG-2-4B	15–30	29.9	✓	✓	✓	✓
FG-2-5	3/6/2001	FG-2-5A	0–15	0.73	✓		✓	
	3/6/2001	FG-2-5B	15–30	0.22	✓		✓	

Note: EPA - U.S. Environmental Protection Agency
LEL - lowest effect level
NYSDEC - New York State Department of Environmental Conservation
SEL - severe effect level

Table A-6
Mercury concentrations in Geddes Brook floodplain soil samples—2002

Sample ID	Lab Sample ID	Date Sampled	Sample Depth (in.)	Mercury (mg/kg dry)	Benchmark Exceeded: NYSDEC LEL (benthos)	NYSDEC SEL (benthos)	EPA Region 4 Screening	EPA Region 9 Residential
SB-28A	607686	12/10/2002	0–6	5.8	✓	✓	✓	
SB-28B	607687	12/10/2002	6–12	1.6	✓	✓	✓	
SB-29A	607682	12/10/2002	0–6	0.84	✓		✓	
SB-29B	607683	12/10/2002	6–12	0.29	✓		✓	
SB-33A	607677	12/10/2002	0–6	5.4	✓	✓	✓	
SB-133A	607679	12/10/2002	0–6	6	✓	✓	✓	
SB-33B	607678	12/10/2002	6–12	16.2	✓	✓	✓	
SB-33C	607705	12/10/2002	12–24	36.6	✓	✓	✓	✓
SB-33D	607707	12/10/2002	24–36	6.2	✓	✓	✓	
SB-34A	607697	12/10/2002	0–6	0.83	✓		✓	
SB-34B	607698	12/10/2002	6–12	2.5	✓	✓	✓	
SB-36A	607680	12/10/2002	0–6	1.7	✓	✓	✓	
SB-36B	607681	12/10/2002	6–12	0.86	✓		✓	
SB-38A	607692	12/10/2002	0–6	3.7	✓	✓	✓	
SB-38B	607693	12/10/2002	6–12	3.6	✓	✓	✓	
SB-38C	607716	12/10/2002	12–24	10.1	✓	✓	✓	
SB-138C	607718	12/10/2002	12–24	10.5	✓	✓	✓	
SB-38D	607717	12/10/2002	24–36	34.6	✓	✓	✓	✓
SB-40A	607689	12/10/2002	0–6	2.5	✓	✓	✓	
SB-40B	607690	12/10/2002	6–12	0.55	✓		✓	
SB-40C		12/10/2002	12–24	3.2	✓	✓	✓	
SB-40D	607715	12/10/2002	24–36	6.3	✓	✓	✓	
SB-26A	608168	12/11/2002	0–6	6.3	✓	✓	✓	
SB-26B	608169	12/11/2002	6–12	2.6	✓	✓	✓	
SB-126B	608170	12/11/2002	6–12	2.8	✓	✓	✓	
SB-26C	608180	12/11/2002	12–24	0.14			✓	
SB-26D	608181	12/11/2002	24–36	0.05				
SB-27A	608171	12/11/2002	0–6	1.9	✓	✓	✓	
SB-27B	608172	12/11/2002	6–12	2.2	✓	✓	✓	
SB-27C	608182	12/11/2002	12–24	2.9	✓	✓	✓	
SB-27D	608183	12/11/2002	24–36	0.73	✓		✓	
SB-30A	608173	12/11/2002	0–6	3.7	✓	✓	✓	
SB-30B	608174	12/11/2002	6–12	1.5	✓	✓	✓	
SB-30C	608184	12/11/2002	12–24	0.44	✓		✓	
SB-30D	608185	12/11/2002	24–36	0.07				
SB-31A	608175	12/11/2002	0–6	0.92	✓		✓	
SB-31B	608176	12/11/2002	6–12	0.38	✓		✓	
SB-31C	608186	12/11/2002	12–24	0.24	✓		✓	
SB-31D	608187	12/11/2002	24–36	0.19	✓		✓	
SB-32A	608177	12/11/2002	0–6	4.7	✓	✓	✓	
SB-32B	608178	12/11/2002	6–12	9.9	✓	✓	✓	
SB-32C	608188	12/11/2002	12–24	0.54	✓		✓	
SB-32D	608189	12/11/2002	24–36	0.08				
SB-35A	608165	12/11/2002	0–6	1.4	✓	✓	✓	
SB-35B	608166	12/11/2002	6–12	1.1	✓		✓	
SB-135B	608167	12/11/2002	6–12	2	✓	✓	✓	
SB-08A	608361	12/12/2002	0–6	5.9	✓	✓	✓	
SB-108A	608362	12/12/2002	0–6	5.7	✓	✓	✓	
SB-08AS	608361	12/12/2002		5.6194	✓	✓	✓	

Table A-6. (cont.)

					Benchmark Exceeded			
Sample ID	Lab Sample ID	Date Sampled	Sample Depth (in.)	Mercury (mg/kg dry)	NYSDEC LEL (benthos)	NYSDEC SEL (benthos)	EPA Region 4 Screening Value	EPA Region 9 Residential
SB-08B	608363	12/12/2002	6–12	1.5	✓	✓	✓	
SB-08C	608381	12/12/2002	12–24	1.2	✓		✓	
SB-08D	608382	12/12/2002	24–36	0.74	✓		✓	
SB-09A	608364	12/12/2002	0–6	1.1	✓		✓	
SB-09AD	608364	12/12/2002		1.1236	✓		✓	
SB-09AS	608364	12/12/2002		1.3771	✓	✓	✓	
SB-09B	608365	12/12/2002	6–12	0.92	✓		✓	
SB-09C	608383	12/12/2002	12–24	9.5	✓	✓	✓	
SB-109C	608384	12/12/2002	12–24	12.1	✓	✓	✓	
SB-09D	608385	12/12/2002	24–36	9.1	✓	✓	✓	
SB-10A	608366	12/12/2002	0–6	1.1	✓		✓	
SB-10B	608367	12/12/2002	6–12	0.34	✓		✓	
SB-10C	608386	12/12/2002	12–24	0.06				
SB-10D	608387	12/12/2002	24–36	0.04 *U*				
SB-11A	608368	12/12/2002	0–6	6.9	✓	✓	✓	
SB-11B	608369	12/12/2002	6–12	2.6	✓	✓	✓	
SB-11C	608388	12/12/2002	12–24	1.1	✓		✓	
SB-11D	608389	12/12/2002	24–36	0.04 *U*				
SB-12A	608370	12/12/2002	0–6	1.9	✓	✓	✓	
SB-12B	608371	12/12/2002	6–12	2.1	✓	✓	✓	
SB-12C	608390	12/12/2002	12–24	0.36	✓		✓	
SB-12D	608391	12/12/2002	24–36	0.13			✓	
SB-13A	608372	12/12/2002	0–6	2	✓	✓	✓	
SB-13B	608373	12/12/2002	6–12	0.84	✓		✓	
SB-13C	608392	12/12/2002	12–24	0.37	✓		✓	
SB-13D	608393	12/12/2002	24–36	2.8	✓	✓	✓	
SB-14A	608376	12/12/2002	0–6	11.5	✓	✓	✓	
SB-14B	608377	12/12/2002	6–12	1.3	✓		✓	
SB-14C	608396	12/12/2002	12–24	0.15			✓	
SB-14D	608397	12/12/2002	24–36	0.09				
SB-37A	608374	12/12/2002	0–6	12.2	✓	✓	✓	
SB-37B	608375	12/12/2002	6–12	12.7	✓	✓	✓	
SB-37C	608394	12/12/2002	12–24	1.4	✓	✓	✓	
SB-37D	608395	12/12/2002	24–36	0.17	✓		✓	
SB-39A	608378	12/12/2002	0–6	5.1	✓	✓	✓	
SB-39B	608379	12/12/2002	6–12	0.75	✓		✓	
SB-39C	608398	12/12/2002	12–24	0.11			✓	
SB-39D	608399	12/12/2002	24–36	0.05				
SB-42A	608797	12/13/2002	0–6	4.1	✓	✓	✓	
SB-142A	608799	12/13/2002	0–6	3.8	✓	✓	✓	
SB-42B	608798	12/13/2002	6–12	3.6	✓	✓	✓	
SB-43A	608802	12/13/2002	0–6	3.4	✓	✓	✓	
SB-43B	608803	12/13/2002	6–12	2	✓	✓	✓	
SB-43C	608813	12/13/2002	12–24	0.11			✓	
SB-43D	608814	12/13/2002	24–36	0.05				
SB-44A	608800	12/13/2002	0–6	3.7	✓	✓	✓	
SB-44B	608801	12/13/2002	6–12	4.4	✓	✓	✓	
SB-44C	608811	12/13/2002	12–24	0.23	✓		✓	
SB-44D	608812	12/13/2002	24–36	0.14			✓	

Table A-6. (cont.)

					Benchmark Exceeded			
Sample ID	Lab Sample ID	Date Sampled	Sample Depth (in.)	Mercury (mg/kg dry)	NYSDEC LEL (benthos)	NYSDEC SEL (benthos)	EPA Region 4 Screening Value	EPA Region 9 Residential
SB-45A	608804	12/13/2002	0–6	0.91	✓		✓	
SB-45B	608805	12/13/2002	6–12	0.55	✓		✓	
SB-45C	608815	12/13/2002	12–24	0.11			✓	
SB-45D	608816	12/13/2002	24–36	0.04 *U*				
SB-46A	608806	12/13/2002	0–6	0.58	✓		✓	
SB-46B	608807	12/13/2002	6–12	3.6	✓	✓	✓	
SB-46C	608817	12/13/2002	12–24	2.4	✓	✓	✓	
SB-46D	608818	12/13/2002	24–36	0.45	✓		✓	
SB-47A	609432	12/17/2002	0–6	3.6	✓	✓	✓	
SB-147A	609434	12/17/2002	0–6	5.6	✓	✓	✓	
SB-47B	609433	12/17/2002	6–12	0.95	✓		✓	
SB-47C	609449	12/17/2002	12–24	0.52	✓		✓	
SB-47D	609450	12/17/2002	24–36	0.29	✓		✓	
SB-49A	609435	12/17/2002	0–6	1.8	✓	✓	✓	
SB-49B	609436	12/17/2002	6–12	1.1	✓		✓	
SB-49C	609451	12/17/2002	12–24	0.08				
SB-49D	609452	12/17/2002	24–36	0.11			✓	
SB-50A	609437	12/17/2002	0–6	0.79	✓		✓	
SB-50B	609438	12/17/2002	6–12	0.75	✓		✓	
SB-50C	609453	12/17/2002	12–24	0.05				
SB-51A	609428	12/17/2002	0–6	14.7	✓	✓	✓	
SB-51B	609429	12/17/2002	6–12	16.1	✓	✓	✓	
SB-51C	609444	12/17/2002	12–24	6.3	✓	✓	✓	
SB-51D	609445	12/17/2002	24–36	22.5	✓	✓	✓	
SB-52A	609426	12/17/2002	0–6	2.8	✓	✓	✓	
SB-52B	609427	12/17/2002	6–12	2.1	✓	✓	✓	
SB-52C	609441	12/17/2002	12–24	2	✓	✓	✓	
SB-52D	609443	12/17/2002	24–36	14.3	✓	✓	✓	
SB-53A	609430	12/17/2002	0–6	15	✓	✓	✓	
SB-53B	609431	12/17/2002	6–12	1.2	✓		✓	
SB-53C	609447	12/17/2002	12–24	1.1	✓		✓	
SB-53D	609448	12/17/2002	24–36	0.13			✓	
SB-54A	609419	12/17/2002	0–6	12	✓	✓	✓	
SB-54B	609421	12/17/2002	6–12	21.6	✓	✓	✓	
SB-54C	609439	12/17/2002	12–24	38.5	✓	✓	✓	✓
SB-54D	609440	12/17/2002	24–36	17.5	✓	✓	✓	
SB-154D	609529	12/17/2002	24–36	17.7	✓	✓	✓	
SB-18A	609749	12/18/2002	0–6	0.22 *N*	✓		✓	
SB-18B	609750	12/18/2002	6–12	0.25 *N*	✓		✓	
SB-18C	609767	12/18/2002	12–24	0.81	✓		✓	
SB-18D	609768	12/18/2002	24–36	1.3	✓		✓	
SB-19A	609757	12/18/2002	0–6	0.26 *N*	✓		✓	
SB-119A	609763	12/18/2002	0–6	0.27 *N*	✓		✓	
SB-19C	609775	12/18/2002	12–24	0.33	✓		✓	
SB-19D	609776	12/18/2002	24–36	0.24	✓		✓	
SB-20A	609759	12/18/2002	0–6	6 *N*	✓	✓	✓	
SB-20B	609760	12/18/2002	6–12	21.1 *N*	✓	✓	✓	
SB-20C	609777	12/18/2002	12–24	5.5	✓	✓	✓	
SB-20D	609778	12/18/2002	24–36	0.11			✓	

Table A-6. (cont.)

Sample ID	Lab Sample ID	Date Sampled	Sample Depth (in.)	Mercury (mg/kg dry)	Benchmark Exceeded: NYSDEC LEL (benthos)	NYSDEC SEL (benthos)	EPA Region 4 Screening Value	EPA Region 9 Residential
SB-21A	609761	12/18/2002	0–6	2.5 *N*	✓	✓	✓	
SB-21B	609762	12/18/2002	6–12	33.8 *N*	✓	✓	✓	✓
SB-21C	609779	12/18/2002	12–24	18.8	✓	✓	✓	
SB-21D	609780	12/18/2002	24–36	0.65	✓		✓	
SB-22A	609755	12/18/2002	0–6	2 *N*	✓	✓	✓	
SB-22B	609756	12/18/2002	6–12	2.6 *N*	✓	✓	✓	
SB-22C	609773	12/18/2002	12–24	0.06				
SB-22D	609774	12/18/2002	24–36	0.18	✓		✓	
SB-23A	609753	12/18/2002	0–6	0.13 *N*			✓	
SB-23B	609754	12/18/2002	6–12	0.04 *N*				
SB-24A	609747	12/18/2002	0–6	15.7 *N*	✓	✓	✓	
SB-24B	609748	12/18/2002	6–12	35.3 *N*	✓	✓	✓	✓
SB-24C	609769	12/18/2002	12–24	0.62	✓		✓	
SB-24D	609770	12/18/2002	24–36	0.08				
SB-25A	609743	12/18/2002	0–6	3.5 *N*	✓	✓	✓	
SB-25B	609744	12/18/2002	6–12	30.4 *N*	✓	✓	✓	✓
SB-25C	609764	12/18/2002	12–24	32.5	✓	✓	✓	✓
SB-125C	609766	12/18/2002	12–24	34.4	✓	✓	✓	✓
SB-50D	609781	12/17/2002	24–36	0.04				
SB-02A	610081	12/19/2002	0–6	0.24	✓		✓	
SB-02B	610082	12/19/2002	6–12	21.2	✓	✓	✓	
SB-02C	610103	12/19/2002	12–24	23.6	✓	✓	✓	✓
SB-02D	610104	12/19/2002	24–36	31.7	✓	✓	✓	✓
SB-03A	610086	12/19/2002	0–6	5.3	✓	✓	✓	
SB-03B	610087	12/19/2002	6–12	5.6	✓	✓	✓	
SB-03C	610100	12/19/2002	12–24	174	✓	✓	✓	✓
SB-03D	610101	12/19/2002	24–36	34	✓	✓	✓	✓
SB-04A	610084	12/19/2002	0–6	0.38	✓		✓	
SB-04B	610085	12/19/2002	6–12	0.31	✓		✓	
SB-04C	610098	12/19/2002	12–24	0.5	✓		✓	
SB-04D	610099	12/19/2002	24–36	0.66	✓		✓	
SB-104D	610102	12/19/2002	24–36	0.58	✓		✓	
SB-07A	610077	12/19/2002	0–6	0.55	✓		✓	
SB-07B	610078	12/19/2002	6–12	0.05				
SB-07C	610094	12/19/2002	12–24	0.05				
SB-07D	610095	12/19/2002	24–36	0.04 *U*				
SB-15A	610070	12/19/2002	0–6	0.23	✓		✓	
SB-15B	610071	12/19/2002	6–12	0.08				
SB-115B	610072	12/19/2002	6–12	0.05				
SB-15C	610088	12/19/2002	12–24	0.1				
SB-15D	610089	12/19/2002	24–36	24	✓	✓	✓	✓
SB-16A	610073	12/19/2002	0–6	1.5	✓	✓	✓	
SB-16B	610074	12/19/2002	6–12	10.1	✓	✓	✓	
SB-16C	610090	12/19/2002	12–24	17.1	✓	✓	✓	
SB-16D	610091	12/19/2002	24–36	0.39	✓		✓	
SB-17A	610075	12/19/2002	0–6	2.4	✓	✓	✓	
SB-17B	610076	12/19/2002	6–12	39.1	✓	✓	✓	✓
SB-17C	610092	12/19/2002	12–24	39	✓	✓	✓	✓
SB-17D	610093	12/19/2002	24–36	1.2	✓		✓	

Table A-6. (cont.)

Sample ID	Lab Sample ID	Date Sampled	Sample Depth (in.)	Mercury (mg/kg dry)	Benchmark Exceeded: NYSDEC LEL (benthos)	NYSDEC SEL (benthos)	EPA Region 4 Screening Value	EPA Region 9 Residential
SB-48A	610079	12/19/2002	0–6	9.8	✓	✓	✓	
SB-48B	610080	12/19/2002	6–12	3.3	✓	✓	✓	
SB-48C	610096	12/19/2002	12–24	0.08				
SB-48D	610097	12/19/2002	24–36	0.04 *U*				
SB-01A	611005	12/23/2002	0–6	5.3	✓	✓	✓	
SB-01B	611006	12/23/2002	6–12	3.1	✓	✓	✓	
SB-01C	611013	12/23/2002	12–24	1.6	✓	✓	✓	
SB-01D	611014	12/23/2002	24–36	1	✓		✓	
SB-05A	611007	12/23/2002	0–6	0.91	✓		✓	
SB-05B	611008	12/23/2002	6–12	0.09				
SB-05C	611015	12/23/2002	12–24	0.08				
SB-05D	611016	12/23/2002	24–36	0.06				
SB-06A	611009	12/23/2002	0–6	1.5	✓	✓	✓	
SB-06B	611010	12/23/2002	6–12	8.1	✓	✓	✓	
SB-06C	611017	12/23/2002	12–24	269	✓	✓	✓	✓
SB-06D	611018	12/23/2002	24–36	156	✓	✓	✓	✓
SB-29C	611011	12/23/2002	12–24	4.9	✓	✓	✓	
SB-29D	611012	12/23/2002	24–36	0.14			✓	
SB-34C	611002	12/23/2002	12–24	0.29	✓		✓	
SB-34D	611003	12/23/2002	24–36	0.05				
SB-35C	610999	12/23/2002	12–24	0.12			✓	
SB-35D	611000	12/23/2002	24–36	0.05				
SB-135D	611001	12/23/2002	24–36	0.06				
SB-36C	610997	12/23/2002	12–24	0.11			✓	
SB-36D	610998	12/23/2002	24–36	0.05				
SS-01A	611299	12/27/2002	0–6	0.04 *U*				
SS-02A	611298	12/27/2002	0–6	1.8	✓	✓	✓	
SS-04A	611297	12/27/2002	0–6	0.04				
SS-05A	611296	12/27/2002	0–6	0.04 *U*				
SS-06A	611294	12/27/2002	0–6	0.04 *U*				
SS-106A	611295	12/27/2002	0–6	0.05				
SS-07A	611293	12/27/2002	0–6	0.04 *U*				
SS-08A	611292	12/27/2002	0–6	0.06 *U*				

Note: N - presumptive evidence exists that the compound is present at the specified concentration
U - undetected
EPA- U.S. Environmental Protection Agency
NYSDEC - New York State Department of Environmental Conservation
LEL - lowest effect level
SEL - severe effect level
Samples with IDs beginning at 101 are duplicates of the sample listed directly above.

ATTACHMENT 1

RISK SUMMARY TABLES FROM HHRA AND BERA

TABLE 9.1.RME
Summary of Receptor Risks and Hazards for COPCs
Adult: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult (18 and older)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish Tissue	Fish Fillet	**Inorganics**					**Inorganics**					
			Arsenic (inorganic)	3.5E-06	N/A	N/A	3.5E-06	Arsenic (inorganic)	Skin	1.8E-02	N/A	N/A	1.8E-02
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	1.4E-02	N/A	N/A	1.4E-02
			Copper	N/A	N/A	N/A	N/A	Copper	Liver/Kidneys/Forestomach	1.1E-02	N/A	N/A	1.1E-02
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.1E-02	N/A	N/A	1.1E-02
			Mercury (as methylmercury)	N/A	N/A	N/A	N/A	Mercury (as methylmercury)	DNI	7.8E-01	N/A	N/A	7.8E-01
			Nickel	N/A	N/A	N/A	N/A	Nickel	Whole Body/Major Organs	4.8E-03	N/A	N/A	4.8E-03
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	2.6E-02	N/A	N/A	2.6E-02
			Vanadium	N/A	N/A	N/A	N/A	Vanadium	Kidneys	1.7E-01	N/A	N/A	1.7E-01
			Zinc	N/A	N/A	N/A	N/A	Zinc	Blood	6.4E-03	N/A	N/A	6.4E-03
			SVOCs					**SVOCs**					
			Hexachlorobenzene	2.5E-06	N/A	N/A	2.5E-06	Hexachlorobenzene	Liver	4.6E-03	N/A	N/A	4.6E-03
			Pesticides					**Pesticides**					
			4,4'-DDD	9.3E-08	N/A	N/A	9.3E-08	4,4'-DDD	Immune System	3.9E-03	N/A	N/A	3.9E-03
			4,4'-DDE	4.8E-07	N/A	N/A	4.8E-07	4,4'-DDE	Male Sexual Development	1.1E-02	N/A	N/A	1.1E-02
			4,4'-DDT	6.5E-08	N/A	N/A	6.5E-08	4,4'-DDT	Liver	9.0E-04	N/A	N/A	9.0E-04
			Dieldrin	4.2E-06	N/A	N/A	4.2E-06	Dieldrin	Liver	1.2E-02	N/A	N/A	1.2E-02
			Heptachlor epoxide	6.7E-07	N/A	N/A	6.7E-07	Heptachlor epoxide	Liver	1.3E-02	N/A	N/A	1.3E-02
			PCBs					**PCBs**					
			Aroclor 1248	N/A	N/A	N/A	N/A	Aroclor 1248	Assumed same as Ar 1254	2.0E+00	N/A	N/A	2.0E+00
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	1.4E-01	N/A	N/A	1.4E-01
			Aroclor 1260	N/A	N/A	N/A	N/A	Aroclor 1260	Assumed same as Ar 1254	8.5E-01	N/A	N/A	8.5E-01
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	3.0E+00	N/A	N/A	3.0E+00
			Total PCBs	4.2E-05	N/A	N/A	4.2E-05	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	4.0E-05	N/A	N/A	4.0E-05	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Fish Tissue - Total)	9.3E-05	N/A	N/A	9.3E-05			4.1E+00	N/A	N/A	4.1E+00
						Total Risk Across Fish Tissue	9.3E-05					Total Hazard Across Fish Tissue	4.12
Sediment	Surface Sediment	Upper Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.2E-03	N/A	N/A	1.2E-03
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	4.7E-03	N/A	N/A	4.7E-03
			Arsenic	9.6E-06	N/A	4.9E-06	1.5E-05	Arsenic	Skin	5.0E-02	N/A	2.6E-02	7.6E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	8.1E-04	N/A	N/A	8.1E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	7.5E-03	N/A	N/A	7.5E-03
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	1.8E-03	N/A	N/A	1.8E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	2.1E-04	N/A	N/A	2.1E-04
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	3.5E-06	N/A	N/A	3.5E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	2.0E-03	N/A	N/A	2.0E-03
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	8.6E-02	N/A	N/A	8.6E-02

TABLE 9.1.RME
Summary of Receptor Risks and Hazards for COPCs
Adult: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			SVOCs					**SVOCs**					
			Hexachlorobenzene	3.7E-10	N/A	6.3E-10	9.9E-10	Hexachlorobenzene	Liver	6.7E-07	N/A	1.1E-06	1.8E-06
			PAHs					**PAHs**					
			Benz(a)anthracene	2.3E-07	N/A	5.2E-07	7.5E-07	Benz(a)anthracene	Kidney	2.5E-05	N/A	5.5E-05	8.0E-05
			Benzo(a)pyrene	2.5E-06	N/A	5.6E-06	8.2E-06	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	2.7E-07	N/A	6.0E-07	8.7E-07	Benzo(b)fluoranthene	Kidney	2.9E-05	N/A	6.4E-05	9.3E-05
			Dibenz(a,h)anthracene	2.7E-07	N/A	6.1E-07	8.9E-07	Dibenz(a,h)anthracene	Kidney	2.9E-06	N/A	6.5E-06	9.4E-06
			Indeno(1,2,3-cd)pyrene	1.1E-07	N/A	2.4E-07	3.5E-07	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	6.9E-06	N/A	1.5E-05	2.2E-05
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	2.4E-05	N/A	5.2E-05	7.6E-05
			Pesticides					**Pesticides**					
			Heptachlor epoxide	1.5E-09	N/A	N/A	1.5E-09	Heptachlor epoxide	Liver	3.0E-05	N/A	N/A	3.0E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	N/A	N/A	N/A	N/A
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	N/A	N/A	N/A	N/A
			Total PCBs	N/A	N/A	N/A	N/A	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	4.0E-08	N/A	2.1E-08	6.1E-08	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Upper Geddes Brook Surface Sediment Total)		1.3E-05	N/A	1.3E-05	2.6E-05			1.5E-01	N/A	2.6E-02	1.8E-01
Sediment	Surface Sediment	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	9.4E-04	N/A	N/A	9.4E-04
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	2.7E-04	N/A	N/A	2.7E-04
			Arsenic	8.3E-07	N/A	4.2E-07	1.3E-06	Arsenic	Skin	4.3E-03	N/A	2.2E-03	6.5E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	1.3E-03	N/A	N/A	1.3E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	1.5E-05	N/A	N/A	1.5E-05
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	6.5E-03	N/A	N/A	6.5E-03
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	6.1E-03	N/A	N/A	6.1E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	2.5E-03	N/A	N/A	2.5E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	6.4E-06	N/A	N/A	6.4E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	2.4E-05	N/A	N/A	2.4E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	2.4E-03	N/A	N/A	2.4E-03
			SVOCs					**SVOCs**					
			Hexachlorobenzene	9.4E-08	N/A	1.6E-07	2.5E-07	Hexachlorobenzene	Liver	1.7E-04	N/A	2.9E-04	4.6E-04
			PAHs					**PAHs**					
			Benz(a)anthracene	7.0E-08	N/A	1.6E-07	2.3E-07	Benz(a)anthracene	Kidney	7.4E-06	N/A	1.7E-05	2.4E-05
			Benzo(a)pyrene	7.6E-07	N/A	1.7E-06	2.4E-06	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	1.3E-07	N/A	2.9E-07	4.3E-07	Benzo(b)fluoranthene	Kidney	1.4E-05	N/A	3.1E-05	4.5E-05
			Dibenz(a,h)anthracene	1.2E-07	N/A	2.6E-07	3.8E-07	Dibenz(a,h)anthracene	Kidney	1.3E-06	N/A	2.8E-06	4.1E-06
			Indeno(1,2,3-cd)pyrene	2.1E-08	N/A	4.7E-08	6.8E-08	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	1.3E-06	N/A	3.0E-06	4.3E-06
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	8.5E-06	N/A	1.9E-05	2.7E-05
			Pesticides					**Pesticides**					
			Heptachlor epoxide	2.8E-08	N/A	N/A	2.8E-08	Heptachlor epoxide	Liver	5.4E-04	N/A	N/A	5.4E-04
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	6.0E-04	N/A	1.4E-03	2.0E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	8.6E-04	N/A	2.1E-03	2.9E-03
			Total PCBs	2.2E-08	N/A	5.3E-08	7.5E-08	Total PCBs	N/A	N/A	N/A	N/A	N/A

TABLE 9.1.RME
Summary of Receptor Risks and Hazards for COPCs
Adult: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	8.7E-08	N/A	4.5E-08	1.3E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Lower Geddes Brook Surface Sediment Total)		2.2E-06	N/A	3.1E-06	5.3E-06			2.6E-02	N/A	4.6E-03	3.0E-02
Sediment	Surface Sediment	Upper Ninemile Creek	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.6E-03	N/A	N/A	1.6E-03
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	N/A	N/A	N/A	N/A
			Arsenic	6.6E-07	N/A	3.4E-07	1.0E-06	Arsenic	Skin	3.4E-03	N/A	1.8E-03	5.2E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	9.0E-04	N/A	N/A	9.0E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.0E-02	N/A	N/A	1.0E-02
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	6.1E-03	N/A	N/A	6.1E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	8.4E-05	N/A	N/A	8.4E-05
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	3.3E-06	N/A	N/A	3.3E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	2.1E-05	N/A	N/A	2.1E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			SVOCs					**SVOCs**					
			Hexachlorobenzene	N/A	N/A	N/A	N/A	Hexachlorobenzene	Liver	N/A	N/A	N/A	N/A
			PAHs					**PAHs**					
			Benz(a)anthracene	9.7E-09	N/A	2.2E-08	3.1E-08	Benz(a)anthracene	Kidney	1.0E-06	N/A	2.3E-06	3.3E-06
			Benzo(a)pyrene	9.7E-08	N/A	2.2E-07	3.1E-07	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	9.7E-09	N/A	2.2E-08	3.1E-08	Benzo(b)fluoranthene	Kidney	1.0E-06	N/A	2.3E-06	3.3E-06
			Dibenz(a,h)anthracene	N/A	N/A	N/A	N/A	Dibenz(a,h)anthracene	Kidney	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	6.5E-09	N/A	1.4E-08	2.1E-08	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	4.1E-07	N/A	9.2E-07	1.3E-06
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	9.8E-07	N/A	2.2E-06	3.1E-06
			Pesticides					**Pesticides**					
			Heptachlor epoxide	N/A	N/A	N/A	N/A	Heptachlor epoxide	Liver	N/A	N/A	N/A	N/A
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	N/A	N/A	N/A	N/A
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	N/A	N/A	N/A	N/A
			Total PCBs	N/A	N/A	N/A	N/A	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	3.4E-08	N/A	1.7E-08	5.1E-08	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Upper Ninemile Creek Surface Sediment Total)		8.2E-07	N/A	6.3E-07	1.5E-06			2.3E-02	N/A	1.8E-03	2.4E-02
Sediment	Surface Sediment	Lower Ninemile Creek	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	9.9E-04	N/A	N/A	9.9E-04
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	1.0E-04	N/A	N/A	1.0E-04
			Arsenic	7.4E-07	N/A	3.8E-07	1.1E-06	Arsenic	Skin	3.8E-03	N/A	2.0E-03	5.8E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	9.2E-04	N/A	N/A	9.2E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	2.1E-05	N/A	N/A	2.1E-05
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	7.1E-03	N/A	N/A	7.1E-03
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	3.4E-03	N/A	N/A	3.4E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	7.9E-03	N/A	N/A	7.9E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	6.3E-06	N/A	N/A	6.3E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	3.0E-05	N/A	N/A	3.0E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	2.7E-03	N/A	N/A	2.7E-03

TABLE 9.1.RME
Summary of Receptor Risks and Hazards for COPCs
Adult: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			SVOCs					**SVOCs**					
			Hexachlorobenzene	3.7E-07	N/A	6.4E-07	1.0E-06	Hexachlorobenzene	Liver	6.8E-04	N/A	1.2E-03	1.8E-03
			PAHs					**PAHs**					
			Benz(a)anthracene	3.0E-08	N/A	6.6E-08	9.6E-08	Benz(a)anthracene	Kidney	3.2E-06	N/A	7.0E-06	1.0E-05
			Benzo(a)pyrene	3.0E-07	N/A	6.6E-07	9.6E-07	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	3.3E-08	N/A	7.3E-08	1.1E-07	Benzo(b)fluoranthene	Kidney	3.5E-06	N/A	7.8E-06	1.1E-05
			Dibenz(a,h)anthracene	7.0E-08	N/A	1.6E-07	2.3E-07	Dibenz(a,h)anthracene	Kidney	7.5E-07	N/A	1.7E-06	2.4E-06
			Indeno(1,2,3-cd)pyrene	1.5E-08	N/A	3.4E-08	4.9E-08	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	9.6E-07	N/A	2.1E-06	3.1E-06
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	4.4E-06	N/A	9.7E-06	1.4E-05
			Pesticides					**Pesticides**					
			Heptachlor epoxide	2.6E-09	N/A	N/A	2.6E-09	Heptachlor epoxide	Liver	5.0E-05	N/A	N/A	5.0E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	1.5E-03	N/A	3.5E-03	5.0E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	1.2E-03	N/A	3.0E-03	4.2E-03
			Total PCBs	3.6E-08	N/A	8.6E-08	1.2E-07	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.3E-07	N/A	6.6E-08	1.9E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Lower Ninemile Creek Surface Sediment Total)		1.7E-06	N/A	2.2E-06	3.9E-06			2.9E-02	N/A	6.1E-03	3.5E-02
				Total Risk Across Surface Sediment			3.6E-05			Total Hazard Across Surface Sediment			0.27
Soil	Surface Soil	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	2.0E-03	N/A	N/A	2.0E-03
			Arsenic	7.3E-07	N/A	3.8E-07	1.1E-06	Arsenic	Skin	3.8E-03	N/A	2.0E-03	5.8E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	1.2E-03	N/A	N/A	1.2E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	9.7E-03	N/A	N/A	9.7E-03
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	2.9E-03	N/A	N/A	2.9E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	8.0E-03	N/A	N/A	8.0E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	7.8E-06	N/A	N/A	7.8E-06
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			SVOCs					**SVOCs**					
			3-Nitroaniline	N/A	N/A	N/A	N/A	3-Nitroaniline	Blood	N/A	N/A	N/A	N/A
			Hexachlorobenzene	1.9E-07	N/A	3.3E-07	5.3E-07	Hexachlorobenzene	Liver	3.6E-04	N/A	6.1E-04	9.6E-04
			PAHs					**PAHs**					
			Benz(a)anthracene	2.7E-07	N/A	6.0E-07	8.7E-07	Benz(a)anthracene	Kidney	2.9E-05	N/A	6.4E-05	9.3E-05
			Benzo(a)pyrene	3.2E-06	N/A	7.2E-06	1.0E-05	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	2.1E-07	N/A	4.7E-07	6.8E-07	Benzo(b)fluoranthene	Kidney	2.2E-05	N/A	5.0E-05	7.2E-05
			Benzo(g,h,i)perylene	N/A	N/A	N/A	N/A	Benzo(g,h,i)perylene	Kidney	7.0E-06	N/A	1.6E-05	2.3E-05
			Benzo(k)fluoranthene	1.5E-08	N/A	3.4E-08	4.9E-08	Benzo(k)fluoranthene	Kidney	1.6E-05	N/A	3.6E-05	5.2E-05
			Dibenz(a,h)anthracene	9.5E-08	N/A	2.1E-07	3.1E-07	Dibenz(a,h)anthracene	Kidney	1.0E-06	N/A	2.2E-06	3.3E-06
			Indeno(1,2,3-cd)pyrene	8.5E-08	N/A	1.9E-07	2.7E-07	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	5.4E-06	N/A	1.2E-05	1.7E-05
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	3.9E-05	N/A	8.7E-05	1.3E-04
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	1.1E-03	N/A	2.7E-03	3.8E-03
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	1.8E-03	N/A	4.2E-03	6.0E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	2.0E-03	N/A	4.8E-03	6.9E-03
			Total PCBs	5.7E-08	N/A	1.4E-07	2.0E-07	Total PCBs	N/A	N/A	N/A	N/A	N/A

TABLE 9.1.RME
Summary of Receptor Risks and Hazards for COPCs
Adult: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	2.2E-07	N/A	1.1E-07	3.3E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Lower Geddes Brook Surface Soil Total)	5.1E-06	N/A	9.6E-06	1.5E-05			3.0E-02	N/A	7.7E-03	3.8E-02
Soil	Surface Soil	Lower Ninemile Creek	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.5E-03	N/A	N/A	1.5E-03
			Arsenic	8.7E-07	N/A	4.5E-07	1.3E-06	Arsenic	Skin	4.5E-03	N/A	2.3E-03	6.8E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	1.4E-03	N/A	N/A	1.4E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	7.1E-06	N/A	N/A	7.1E-06
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.0E-02	N/A	N/A	1.0E-02
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	3.2E-03	N/A	N/A	3.2E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.7E-03	N/A	N/A	1.7E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	4.7E-05	N/A	N/A	4.7E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	1.7E-03	N/A	N/A	1.7E-03
			SVOCs					**SVOCs**					
			3-Nitroaniline	9.5E-10	N/A	1.6E-09	2.6E-09	3-Nitroaniline	Blood	3.5E-04	N/A	6.0E-04	9.5E-04
			Hexachlorobenzene	3.7E-08	N/A	6.3E-08	1.0E-07	Hexachlorobenzene	Liver	6.7E-05	N/A	1.2E-04	1.8E-04
			PAHs					**PAHs**					
			Benz(a)anthracene	9.1E-08	N/A	2.0E-07	2.9E-07	Benz(a)anthracene	Kidney	9.7E-06	N/A	2.1E-05	3.1E-05
			Benzo(a)pyrene	8.5E-07	N/A	1.9E-06	2.7E-06	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	4.0E-08	N/A	8.9E-08	1.3E-07	Benzo(b)fluoranthene	Kidney	4.3E-06	N/A	9.5E-06	1.4E-05
			Benzo(g,h,i)perylene	N/A	N/A	N/A	N/A	Benzo(g,h,i)perylene	Kidney	5.1E-06	N/A	1.1E-05	1.7E-05
			Benzo(k)fluoranthene	6.9E-09	N/A	1.5E-08	2.2E-08	Benzo(k)fluoranthene	Kidney	7.4E-06	N/A	1.6E-05	2.4E-05
			Dibenz(a,h)anthracene	2.0E-07	N/A	4.4E-07	6.4E-07	Dibenz(a,h)anthracene	Kidney	2.1E-06	N/A	4.7E-06	6.9E-06
			Indeno(1,2,3-cd)pyrene	4.8E-08	N/A	1.1E-07	1.6E-07	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	3.1E-06	N/A	6.9E-06	1.0E-05
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	1.4E-05	N/A	3.0E-05	4.4E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	3.4E-04	N/A	8.2E-04	1.2E-03
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	6.3E-04	N/A	1.5E-03	2.1E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	1.0E-03	N/A	2.4E-03	3.4E-03
			Total PCBs	1.9E-08	N/A	4.5E-08	6.4E-08	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.1E-07	N/A	5.6E-08	1.7E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Lower Ninemile Creek Surface Soil Total)	2.3E-06	N/A	3.4E-06	5.6E-06			2.6E-02	N/A	5.5E-03	3.1E-02
						Total Risk Across Surface Soil	2.0E-05					Total Hazard Across Surface Soil	0.07

TABLE 9.1.RME
Summary of Receptor Risks and Hazards for COPCs
Adult: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Water	Surface Water	Upper Geddes Brook	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	8.4E-04	N/A	2.0E-03	2.9E-03
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	N/A	N/A	N/A	N/A
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	N/A	N/A	N/A	N/A
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	4.8E-05	N/A	4.4E-04	4.8E-04
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	2.5E-06	N/A	1.3E-05	1.5E-05
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	1.6E-07	N/A	N/A	1.6E-07
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.4E-07	N/A	9.1E-05	9.1E-05	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Upper Geddes Brook Surface Water Total)		1.4E-07	N/A	9.1E-05	9.1E-05			8.9E-04	N/A	2.5E-03	3.4E-03
Water	Surface Water	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	7.8E-04	N/A	1.9E-03	2.7E-03
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	N/A	N/A	N/A	N/A
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	2.8E-04	N/A	8.1E-03	8.4E-03
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	1.9E-04	N/A	1.7E-03	1.9E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.8E-04	N/A	9.3E-04	1.1E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	2.3E-06	N/A	N/A	2.3E-06
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	2.5E-02	N/A	8.9E-03	3.4E-02
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Lower Geddes Brook Surface Water Total)		0.0E+00	N/A	0.0E+00	0.0E+00			2.6E-02	N/A	2.2E-02	4.8E-02
Water	Surface Water	Upper Ninemile Creek	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	9.5E-04	N/A	2.3E-03	3.2E-03
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	2.4E-03	N/A	3.5E-02	3.7E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	4.6E-04	N/A	1.3E-02	1.4E-02
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	1.8E-04	N/A	1.6E-03	1.8E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	7.4E-06	N/A	3.8E-05	4.5E-05
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	5.8E-07	N/A	N/A	5.8E-07
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Upper Ninemile Creek Surface Water Total)		0.0E+00	N/A	0.0E+00	0.0E+00			4.0E-03	N/A	5.2E-02	5.6E-02

TABLE 9.1.RME
Summary of Receptor Risks and Hazards for COPCs
Adult: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Water	Surface Water	Lower Ninemile Creek	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	9.5E-04	N/A	2.3E-03	3.2E-03
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	7.2E-04	N/A	1.0E-02	1.1E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	3.8E-04	N/A	1.1E-02	1.1E-02
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	2.3E-04	N/A	2.1E-03	2.3E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	3.9E-05	N/A	2.0E-04	2.4E-04
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	1.2E-06	N/A	N/A	1.2E-06
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Lower Ninemile Creek Surface Water Total)		0.0E+00	N/A	0.0E+00	0.0E+00			2.3E-03	N/A	2.6E-02	2.8E-02
							Total Risk Across Surface Water 9.1E-05						Total Hazard Across Surface Water 0.14
							Total Risk Across All Media and All Exposure Routes 2.4E-04						Total Hazard Index Across All Media and All Exposure Routes 4.6

Total [Lungs] HI =	0.00	Total [DNI] HI =	0.78	Total [Kidney] HI =	0.24	Total [Blood] HI =	0.12
Total [Immune System] HI =	3.09	Total [Birth Weight] HI =	0.00	Total [CNS] HI =	0.04	Total [Body Weight] HI =	0.00
Total [Skin] HI =	0.14	Total [NOAEL] HI =	0.17	Total [Liver] HI =	0.14	Total [Whole Body] HI =	0.05

Notes: Based on an exposure of 30 years the carcinogenic risk is 2E-03.
N/A = Risk or hazard not calculated
Primary Target Organ for Aroclor 1254 is Immune System.
Target Organ Totals: DNI: Developmental Neuropsychological Impairment
NOAEL : No Observed Adverse Effect Level
CNS: Central Nervous System

TABLE 9.2.RME
Summary of Receptor Risks and Hazards for COPCs
Younger Child: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Younger Child (less than 6)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish Tissue	Fish Fillet	**Inorganics**					**Inorganics**					
			Arsenic (inorganic)	1.1E-06	N/A	N/A	1.1E-06	Arsenic (inorganic)	Skin	2.8E-02	N/A	N/A	2.8E-02
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	2.2E-02	N/A	N/A	2.2E-02
			Copper	N/A	N/A	N/A	N/A	Copper	Liver/Kidneys/Forestomach	1.7E-02	N/A	N/A	1.7E-02
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.7E-02	N/A	N/A	1.7E-02
			Mercury (as methylmercury)	N/A	N/A	N/A	N/A	Mercury (as methylmercury)	DNI	1.2E+00	N/A	N/A	1.2E+00
			Nickel	N/A	N/A	N/A	N/A	Nickel	Whole Body/Major Organs	7.4E-03	N/A	N/A	7.4E-03
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	4.1E-02	N/A	N/A	4.1E-02
			Vanadium	N/A	N/A	N/A	N/A	Vanadium	Kidneys	2.6E-01	N/A	N/A	2.6E-01
			Zinc	N/A	N/A	N/A	N/A	Zinc	Blood	1.0E-02	N/A	N/A	1.0E-02
			SVOCs					**SVOCs**					
			Hexachlorobenzene	7.9E-07	N/A	N/A	7.9E-07	Hexachlorobenzene	Liver	7.2E-03	N/A	N/A	7.2E-03
			Pesticides					**Pesticides**					
			4,4'-DDD	2.9E-08	N/A	N/A	2.9E-08	4,4'-DDD	Immune System	6.1E-03	N/A	N/A	6.1E-03
			4,4'-DDE	1.5E-07	N/A	N/A	1.5E-07	4,4'-DDE	Male Sexual Development	1.7E-02	N/A	N/A	1.7E-02
			4,4'-DDT	2.0E-08	N/A	N/A	2.0E-08	4,4'-DDT	Liver	1.4E-03	N/A	N/A	1.4E-03
			Dieldrin	1.3E-06	N/A	N/A	1.3E-06	Dieldrin	Liver	1.9E-02	N/A	N/A	1.9E-02
			Heptachlor epoxide	2.1E-07	N/A	N/A	2.1E-07	Heptachlor epoxide	Liver	2.1E-02	N/A	N/A	2.1E-02
			PCBs					**PCBs**					
			Aroclor 1248	N/A	N/A	N/A	N/A	Aroclor 1248	Assumed same as Ar 1254	3.1E+00	N/A	N/A	3.1E+00
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	2.2E-01	N/A	N/A	2.2E-01
			Aroclor 1260	N/A	N/A	N/A	N/A	Aroclor 1260	Assumed same as Ar 1254	1.3E+00	N/A	N/A	1.3E+00
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	4.7E+00	N/A	N/A	4.7E+00
			Total PCBs	1.3E-05	N/A	N/A	1.3E-05	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.3E-05	N/A	N/A	1.3E-05	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Fish Tissue - Total)	2.9E-05	N/A	N/A	2.9E-05			6.4E+00	N/A	N/A	6.4E+00

Total Risk Across Fish Tissue: 2.9E-05
Total Risk Across All Media and All Exposure Routes: 2.9E-05

Total Hazard Across Fish Tissue: 6.4
Total Hazard Index Across All Media and All Exposure Routes: 6.4

Total [Lungs] HI =	0.00	Total [DNI] HI =	1.21	Total [Kidney] HI =	0.30	Total [Blood] HI =	0.03
Total [Immune System] HI =	4.73	Total [Birth Weight] HI =	0.00	Total [CNS] HI =	0.00	Total [Body Weight] HI =	0.00
Total [Skin] HI =	0.03	Total [NOAEL] HI =	0.00	Total [Liver] HI =	0.08	Total [Whole Body] HI =	0.05

Notes: Based on an exposure of 30 years the carcinogenic risk is 2E-03.
N/A = Risk or hazard not calculated
Primary Target Organ for Aroclor 1254 is Immune System.
Target Organ Totals: DNI: Developmental Neuropsychological Impairment
NOAEL : No Observed Adverse Effect Level
CNS: Central Nervous System

TABLE 9.3.RME
Summary of Receptor Risks and Hazards for COPCs
Older Child: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Older Child (6 to < 18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish Tissue	Fish Fillet	**Inorganics**					**Inorganics**					
			Arsenic (inorganic)	1.5E-06	N/A	N/A	1.5E-06	Arsenic (inorganic)	Skin	2.0E-02	N/A	N/A	2.0E-02
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	1.5E-02	N/A	N/A	1.5E-02
			Copper	N/A	N/A	N/A	N/A	Copper	Liver/Kidneys/Forestomach	1.2E-02	N/A	N/A	1.2E-02
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.2E-02	N/A	N/A	1.2E-02
			Mercury (as methylmercury)	N/A	N/A	N/A	N/A	Mercury (as methylmercury)	DNI	8.4E-01	N/A	N/A	8.4E-01
			Nickel	N/A	N/A	N/A	N/A	Nickel	Whole Body/Major Organs	5.2E-03	N/A	N/A	5.2E-03
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	2.8E-02	N/A	N/A	2.8E-02
			Vanadium	N/A	N/A	N/A	N/A	Vanadium	Kidneys	1.8E-01	N/A	N/A	1.8E-01
			Zinc	N/A	N/A	N/A	N/A	Zinc	Blood	7.0E-03	N/A	N/A	7.0E-03
			SVOCs					**SVOCs**					
			Hexachlorobenzene	1.1E-06	N/A	N/A	1.1E-06	Hexachlorobenzene	Liver	5.0E-03	N/A	N/A	5.0E-03
			Pesticides					**Pesticides**					
			4,4'-DDD	4.0E-08	N/A	N/A	4.0E-08	4,4'-DDD	Immune System	4.3E-03	N/A	N/A	4.3E-03
			4,4'-DDE	2.1E-07	N/A	N/A	2.1E-07	4,4'-DDE	Male Sexual Development	1.2E-02	N/A	N/A	1.2E-02
			4,4'-DDT	2.8E-08	N/A	N/A	2.8E-08	4,4'-DDT	Liver	9.7E-04	N/A	N/A	9.7E-04
			Dieldrin	1.8E-06	N/A	N/A	1.8E-06	Dieldrin	Liver	1.3E-02	N/A	N/A	1.3E-02
			Heptachlor epoxide	2.9E-07	N/A	N/A	2.9E-07	Heptachlor epoxide	Liver	1.4E-02	N/A	N/A	1.4E-02
			PCBs					**PCBs**					
			Aroclor 1248	N/A	N/A	N/A	N/A	Aroclor 1248	Assumed same as Ar 1254	2.2E+00	N/A	N/A	2.2E+00
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	1.5E-01	N/A	N/A	1.5E-01
			Aroclor 1260	N/A	N/A	N/A	N/A	Aroclor 1260	Assumed same as Ar 1254	9.2E-01	N/A	N/A	9.2E-01
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	3.3E+00	N/A	N/A	3.3E+00
			Total PCBs	1.8E-05	N/A	N/A	1.8E-05	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.8E-05	N/A	N/A	1.8E-05	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Fish Tissue - Total)	4.1E-05	N/A	N/A	4.1E-05			4.5E+00	N/A	N/A	4.5E+00
						Total Risk Across Fish Tissue	4.1E-05					Total Hazard Across Fish Tissue	4.47
Sediment	Surface Sediment	Upper Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	2.0E-03	N/A	N/A	2.0E-03
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	7.7E-03	N/A	N/A	7.7E-03
			Arsenic	6.3E-06	N/A	2.7E-05	3.4E-05	Arsenic	Skin	8.1E-02	N/A	3.6E-01	4.4E-01
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	1.3E-03	N/A	N/A	1.3E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.2E-02	N/A	N/A	1.2E-02
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	2.9E-03	N/A	N/A	2.9E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	3.4E-04	N/A	N/A	3.4E-04
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	5.6E-06	N/A	N/A	5.6E-06

TABLE 9.3.RME
Summary of Receptor Risks and Hazards for COPCs
Older Child: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	3.3E-03	N/A	N/A	3.3E-03
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	1.4E-01	N/A	N/A	1.4E-01
			SVOCs					**SVOCs**					
			Hexachlorobenzene	2.4E-10	N/A	3.5E-09	3.7E-09	Hexachlorobenzene	Liver	1.1E-06	N/A	1.6E-05	1.7E-05
			PAHs					**PAHs**					
			Benz(a)anthracene	1.5E-07	N/A	2.9E-06	3.0E-06	Benz(a)anthracene	Kidney	4.0E-05	N/A	7.6E-04	8.0E-04
			Benzo(a)pyrene	1.6E-06	N/A	3.1E-05	3.3E-05	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	1.8E-07	N/A	3.3E-06	3.5E-06	Benzo(b)fluoranthene	Kidney	4.7E-05	N/A	8.9E-04	9.3E-04
			Dibenz(a,h)anthracene	1.8E-07	N/A	3.4E-06	3.6E-06	Dibenz(a,h)anthracene	Kidney	4.8E-06	N/A	9.0E-05	9.5E-05
			Indeno(1,2,3-cd)pyrene	7.0E-08	N/A	1.3E-06	1.4E-06	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	1.1E-05	N/A	2.1E-04	2.2E-04
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	3.8E-05	N/A	7.3E-04	7.6E-04
			Pesticides					**Pesticides**					
			Heptachlor epoxide	1.0E-09	N/A	N/A	1.0E-09	Heptachlor epoxide	Liver	5.0E-05	N/A	N/A	5.0E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	N/A	N/A	N/A	N/A
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	N/A	N/A	N/A	N/A
			Total PCBs	N/A	N/A	N/A	N/A	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	2.6E-08	N/A	1.1E-07	1.4E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Upper Geddes Brook Surface Sediment Total)	8.5E-06	N/A	7.0E-05	7.8E-05			2.5E-01	N/A	3.6E-01	6.1E-01
Sediment	Surface Sediment	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.5E-03	N/A	N/A	1.5E-03
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	4.3E-04	N/A	N/A	4.3E-04
			Arsenic	5.4E-07	N/A	2.4E-06	2.9E-06	Arsenic	Skin	7.0E-03	N/A	3.1E-02	3.7E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	2.1E-03	N/A	N/A	2.1E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	2.4E-05	N/A	N/A	2.4E-05
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.1E-02	N/A	N/A	1.1E-02
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	9.9E-03	N/A	N/A	9.9E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	4.1E-03	N/A	N/A	4.1E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	1.0E-05	N/A	N/A	1.0E-05
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	3.8E-05	N/A	N/A	3.8E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	3.9E-03	N/A	N/A	3.9E-03
			SVOCs					**SVOCs**					
			Hexachlorobenzene	6.1E-08	N/A	8.9E-07	9.5E-07	Hexachlorobenzene	Liver	2.8E-04	N/A	4.1E-03	4.3E-03
			PAHs					**PAHs**					
			Benz(a)anthracene	4.5E-08	N/A	8.6E-07	9.1E-07	Benz(a)anthracene	Kidney	1.2E-05	N/A	2.3E-04	2.4E-04
			Benzo(a)pyrene	4.9E-07	N/A	9.3E-06	9.8E-06	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	8.6E-08	N/A	1.6E-06	1.7E-06	Benzo(b)fluoranthene	Kidney	2.3E-05	N/A	4.3E-04	4.6E-04
			Dibenz(a,h)anthracene	7.7E-08	N/A	1.5E-06	1.5E-06	Dibenz(a,h)anthracene	Kidney	2.1E-06	N/A	3.9E-05	4.1E-05
			Indeno(1,2,3-cd)pyrene	1.4E-08	N/A	2.6E-07	2.7E-07	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	2.2E-06	N/A	4.1E-05	4.4E-05
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	1.4E-05	N/A	2.6E-04	2.8E-04

TABLE 9.3.RME
Summary of Receptor Risks and Hazards for COPCs
Older Child: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Pesticides					**Pesticides**					
			Heptachlor epoxide	1.8E-08	N/A	N/A	1.8E-08	Heptachlor epoxide	Liver	8.8E-04	N/A	N/A	8.8E-04
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	9.8E-04	N/A	2.0E-02	2.1E-02
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	1.4E-03	N/A	2.9E-02	3.0E-02
			Total PCBs	1.4E-08	N/A	2.9E-07	3.1E-07	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	5.6E-08	N/A	2.5E-07	3.0E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Lower Geddes Brook Surface Sediment Total)	1.4E-06	N/A	1.7E-05	1.9E-05			4.2E-02	N/A	6.4E-02	1.1E-01
Sediment	Surface Sediment	Upper Ninemile Creek	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	2.7E-03	N/A	N/A	2.7E-03
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	N/A	N/A	N/A	N/A
			Arsenic	4.3E-07	N/A	1.9E-06	2.3E-06	Arsenic	Skin	5.6E-03	N/A	2.5E-02	3.0E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	1.5E-03	N/A	N/A	1.5E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.7E-02	N/A	N/A	1.7E-02
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	1.0E-02	N/A	N/A	1.0E-02
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.4E-04	N/A	N/A	1.4E-04
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	5.3E-06	N/A	N/A	5.3E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	3.4E-05	N/A	N/A	3.4E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			SVOCs					**SVOCs**					
			Hexachlorobenzene	N/A	N/A	N/A	N/A	Hexachlorobenzene	Liver	N/A	N/A	N/A	N/A
			PAHs					**PAHs**					
			Benz(a)anthracene	6.3E-09	N/A	1.2E-07	1.3E-07	Benz(a)anthracene	Kidney	1.7E-06	N/A	3.2E-05	3.4E-05
			Benzo(a)pyrene	6.3E-08	N/A	1.2E-06	1.3E-06	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	6.3E-09	N/A	1.2E-07	1.3E-07	Benzo(b)fluoranthene	Kidney	1.7E-06	N/A	3.2E-05	3.4E-05
			Dibenz(a,h)anthracene	N/A	N/A	N/A	N/A	Dibenz(a,h)anthracene	Kidney	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	4.2E-09	N/A	8.0E-08	8.4E-08	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	6.7E-07	N/A	1.3E-05	1.3E-05
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	1.6E-06	N/A	3.0E-05	3.2E-05
			Pesticides					**Pesticides**					
			Heptachlor epoxide	N/A	N/A	N/A	N/A	Heptachlor epoxide	Liver	N/A	N/A	N/A	N/A
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	N/A	N/A	N/A	N/A
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	N/A	N/A	N/A	N/A
			Total PCBs	N/A	N/A	N/A	N/A	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	2.2E-08	N/A	9.6E-08	1.2E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Upper Ninemile Creek Surface Sediment Total)	5.3E-07	N/A	3.5E-06	4.0E-06			3.7E-02	N/A	2.5E-02	6.1E-02

TABLE 9.3.RME
Summary of Receptor Risks and Hazards for COPCs
Older Child: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Surface Sediment	Lower Ninemile Creek	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.6E-03	N/A	N/A	1.6E-03
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	1.7E-04	N/A	N/A	1.7E-04
			Arsenic	4.8E-07	N/A	2.1E-06	2.6E-06	Arsenic	Skin	6.2E-03	N/A	2.7E-02	3.3E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	1.5E-03	N/A	N/A	1.5E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	3.5E-05	N/A	N/A	3.5E-05
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.2E-02	N/A	N/A	1.2E-02
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	5.5E-03	N/A	N/A	5.5E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.3E-02	N/A	N/A	1.3E-02
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	1.0E-05	N/A	N/A	1.0E-05
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	4.9E-05	N/A	N/A	4.9E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	4.4E-03	N/A	N/A	4.4E-03
			SVOCs					**SVOCs**					
			Hexachlorobenzene	2.4E-07	N/A	3.5E-06	3.8E-06	Hexachlorobenzene	Liver	1.1E-03	N/A	1.6E-02	1.7E-02
			PAHs					**PAHs**					
			Benz(a)anthracene	1.9E-08	N/A	3.7E-07	3.9E-07	Benz(a)anthracene	Kidney	5.1E-06	N/A	9.8E-05	1.0E-04
			Benzo(a)pyrene	1.9E-07	N/A	3.7E-06	3.9E-06	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	2.2E-08	N/A	4.1E-07	4.3E-07	Benzo(b)fluoranthene	Kidney	5.7E-06	N/A	1.1E-04	1.1E-04
			Dibenz(a,h)anthracene	4.6E-08	N/A	8.6E-07	9.1E-07	Dibenz(a,h)anthracene	Kidney	1.2E-06	N/A	2.3E-05	2.4E-05
			Indeno(1,2,3-cd)pyrene	9.8E-09	N/A	1.9E-07	2.0E-07	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	1.6E-06	N/A	3.0E-05	3.1E-05
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	7.1E-06	N/A	1.4E-04	1.4E-04
			Pesticides					**Pesticides**					
			Heptachlor epoxide	1.7E-09	N/A	N/A	1.7E-09	Heptachlor epoxide	Liver	8.2E-05	N/A	N/A	8.2E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	2.4E-03	N/A	4.9E-02	5.1E-02
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	2.0E-03	N/A	4.1E-02	4.3E-02
			Total PCBs	2.3E-08	N/A	4.8E-07	5.0E-07	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	8.3E-08	N/A	3.6E-07	4.5E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Lower Ninemile Creek Surface Sediment Total)		1.1E-06	N/A	1.2E-05	1.3E-05			4.7E-02	N/A	8.5E-02	1.3E-01
				Total Risk Across Surface Sediment			1.1E-04			Total Hazard Across Surface Sediment			0.91
Soil	Surface Soil	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	3.2E-03	N/A	N/A	3.2E-03
			Arsenic	4.8E-07	N/A	2.1E-06	2.6E-06	Arsenic	Skin	6.2E-03	N/A	2.7E-02	3.3E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	2.0E-03	N/A	N/A	2.0E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.6E-02	N/A	N/A	1.6E-02
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	4.8E-03	N/A	N/A	4.8E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.3E-02	N/A	N/A	1.3E-02
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	1.3E-05	N/A	N/A	1.3E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A

TABLE 9.3.RME
Summary of Receptor Risks and Hazards for COPCs
Older Child: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			SVOCs					**SVOCs**					
			3-Nitroaniline	N/A	N/A	N/A	N/A	3-Nitroaniline	Blood	N/A	N/A	N/A	N/A
			Hexachlorobenzene	1.3E-07	N/A	1.8E-06	2.0E-06	Hexachlorobenzene	Liver	5.8E-04	N/A	8.4E-03	9.0E-03
			PAHs					**PAHs**					
			Benz(a)anthracene	1.8E-07	N/A	3.3E-06	3.5E-06	Benz(a)anthracene	Kidney	4.7E-05	N/A	8.9E-04	9.4E-04
			Benzo(a)pyrene	2.1E-06	N/A	4.0E-05	4.2E-05	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	1.4E-07	N/A	2.6E-06	2.7E-06	Benzo(b)fluoranthene	Kidney	3.6E-05	N/A	6.9E-04	7.3E-04
			Benzo(g,h,i)perylene	N/A	N/A	N/A	N/A	Benzo(g,h,i)perylene	Kidney	1.1E-05	N/A	2.2E-04	2.3E-04
			Benzo(k)fluoranthene	9.8E-09	N/A	1.9E-07	2.0E-07	Benzo(k)fluoranthene	Kidney	2.6E-05	N/A	5.0E-04	5.2E-04
			Dibenz(a,h)anthracene	6.2E-08	N/A	1.2E-06	1.2E-06	Dibenz(a,h)anthracene	Kidney	1.6E-06	N/A	3.1E-05	3.3E-05
			Indeno(1,2,3-cd)pyrene	5.5E-08	N/A	1.0E-06	1.1E-06	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	8.8E-06	N/A	1.7E-04	1.8E-04
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	6.4E-05	N/A	1.2E-03	1.3E-03
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	1.8E-03	N/A	3.7E-02	3.9E-02
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	2.9E-03	N/A	5.9E-02	6.2E-02
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	3.3E-03	N/A	6.7E-02	7.0E-02
			Total PCBs	3.7E-08	N/A	7.6E-07	8.0E-07	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.4E-07	N/A	6.2E-07	7.6E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Lower Geddes Brook Surface Soil Total)	3.3E-06	N/A	5.3E-05	5.7E-05			4.9E-02	N/A	1.1E-01	1.6E-01
Soil	Surface Soil	Lower Ninemile Creek	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	2.5E-03	N/A	N/A	2.5E-03
			Arsenic	5.7E-07	N/A	2.5E-06	3.0E-06	Arsenic	Skin	7.4E-03	N/A	3.2E-02	4.0E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	2.2E-03	N/A	N/A	2.2E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	1.2E-05	N/A	N/A	1.2E-05
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	1.6E-02	N/A	N/A	1.6E-02
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	5.2E-03	N/A	N/A	5.2E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	2.7E-03	N/A	N/A	2.7E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	7.7E-05	N/A	N/A	7.7E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	2.8E-03	N/A	N/A	2.8E-03
			SVOCs					**SVOCs**					
			3-Nitroaniline	6.2E-10	N/A	9.0E-09	9.6E-09	3-Nitroaniline	Blood	5.7E-04	N/A	8.3E-03	8.9E-03
			Hexachlorobenzene	2.4E-08	N/A	3.5E-07	3.7E-07	Hexachlorobenzene	Liver	1.1E-04	N/A	1.6E-03	1.7E-03
			PAHs					**PAHs**					
			Benz(a)anthracene	5.9E-08	N/A	1.1E-06	1.2E-06	Benz(a)anthracene	Kidney	1.6E-05	N/A	3.0E-04	3.1E-04
			Benzo(a)pyrene	5.6E-07	N/A	1.1E-05	1.1E-05	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	2.6E-08	N/A	4.9E-07	5.2E-07	Benzo(b)fluoranthene	Kidney	7.0E-06	N/A	1.3E-04	1.4E-04
			Benzo(g,h,i)perylene	N/A	N/A	N/A	N/A	Benzo(g,h,i)perylene	Kidney	8.4E-06	N/A	1.6E-04	1.7E-04
			Benzo(k)fluoranthene	4.5E-09	N/A	8.5E-08	9.0E-08	Benzo(k)fluoranthene	Kidney	1.2E-05	N/A	2.3E-04	2.4E-04
			Dibenz(a,h)anthracene	1.3E-07	N/A	2.5E-06	2.6E-06	Dibenz(a,h)anthracene	Kidney	3.5E-06	N/A	6.6E-05	6.9E-05
			Indeno(1,2,3-cd)pyrene	3.2E-08	N/A	6.0E-07	6.3E-07	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	5.0E-06	N/A	9.6E-05	1.0E-04
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	2.2E-05	N/A	4.2E-04	4.4E-04

TABLE 9.3.RME
Summary of Receptor Risks and Hazards for COPCs
Older Child: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	5.6E-04	N/A	1.1E-02	1.2E-02
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	1.0E-03	N/A	2.1E-02	2.2E-02
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	1.6E-03	N/A	3.3E-02	3.5E-02
			Total PCBs	1.2E-08	N/A	2.5E-07	2.6E-07	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	7.1E-08	N/A	3.1E-07	3.8E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Lower Ninemile Creek Surface Soil Total)	1.5E-06	N/A	1.9E-05	2.0E-05			4.2E-02	N/A	7.7E-02	1.2E-01
						Total Risk Across Surface Soil	7.7E-05					Total Hazard Across Surface Soil	0.27
Water	Surface Water	Upper Geddes Brook	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	1.4E-03	N/A	2.4E-03	3.7E-03
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	N/A	N/A	N/A	N/A
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	N/A	N/A	N/A	N/A
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	7.9E-05	N/A	5.1E-04	5.9E-04
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	4.0E-06	N/A	1.5E-05	1.9E-05
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	2.6E-07	N/A	N/A	2.6E-07
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	9.0E-08	N/A	4.3E-05	4.3E-05	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Upper Geddes Brook Surface Water Total)	9.0E-08	N/A	4.3E-05	4.3E-05			1.4E-03	N/A	2.9E-03	4.3E-03
Water	Surface Water	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	1.3E-03	N/A	2.2E-03	3.5E-03
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	N/A	N/A	N/A	N/A
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	4.6E-04	N/A	9.5E-03	1.0E-02
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	3.1E-04	N/A	2.0E-03	2.4E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	2.9E-04	N/A	1.1E-03	1.4E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	3.8E-06	N/A	N/A	3.8E-06
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	4.0E-02	N/A	1.1E-02	5.1E-02
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Lower Geddes Brook Surface Water Total)	0.0E+00	N/A	0.0E+00	0.0E+00			4.3E-02	N/A	2.5E-02	6.8E-02

TABLE 9.3.RME
Summary of Receptor Risks and Hazards for COPCs
Older Child: Reasonable Maximum Exposure Recreational
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Water	Surface Water	Upper Ninemile Creek	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	1.5E-03	N/A	2.7E-03	4.2E-03
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	4.0E-03	N/A	4.1E-02	4.5E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	7.5E-04	N/A	1.6E-02	1.6E-02
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	2.9E-04	N/A	1.9E-03	2.1E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.2E-05	N/A	4.4E-05	5.6E-05
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	9.4E-07	N/A	N/A	9.4E-07
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Upper Ninemile Creek Surface Water Total)	0.0E+00	N/A	0.0E+00	0.0E+00			6.6E-03	N/A	6.1E-02	6.8E-02
Water	Surface Water	Lower Ninemile Creek	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	1.5E-03	N/A	2.7E-03	4.2E-03
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	1.2E-03	N/A	1.2E-02	1.3E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	6.1E-04	N/A	1.3E-02	1.3E-02
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	3.7E-04	N/A	2.4E-03	2.8E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	6.3E-05	N/A	2.3E-04	3.0E-04
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	1.9E-06	N/A	N/A	1.9E-06
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Lower Ninemile Creek Surface Water Total)	0.0E+00	N/A	0.0E+00	0.0E+00			3.8E-03	N/A	3.0E-02	3.4E-02
						Total Risk Across Surface Water	4.3E-05					Total Hazard Across Surface Water	0.17
						Total Risk Across All Media and All Exposure Routes	2.7E-04					Total Hazard Index Across All Media and All Exposure Routes	5.8

Total [Lungs] HI =	0.00	Total [DNI] HI =	0.84	Total [Kidney] HI =	0.28	Total [Blood] HI =	0.19
Total [Immune System] HI =	3.5	Total [Birth Weight] HI =	0.00	Total [CNS] HI =	0.06	Total [Body Weight] HI =	0.00
Total [Skin] HI =	0.70	Total [NOAEL] HI =	0.26	Total [Liver] HI =	0.23	Total [Whole Body] HI =	0.06

Notes: Based on an exposure of 30 years the carcinogenic risk is 2E-03.
N/A = Risk or hazard not calculated
Primary Target Organ for Aroclor 1254 is Immune System.
Target Organ Totals: DNI: Developmental Neuropsychological Impairment
NOAEL : No Observed Adverse Effect Level
CNS: Central Nervous System

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Surface Sediment	Upper Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	9.3E-04	N/A	N/A	9.3E-04
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	3.6E-03	N/A	N/A	3.6E-03
			Arsenic	4.8E-07	N/A	2.2E-07	7.1E-07	Arsenic	Skin	3.7E-02	N/A	1.7E-02	5.5E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	6.1E-04	N/A	N/A	6.1E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	5.6E-03	N/A	N/A	5.6E-03
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	1.3E-03	N/A	N/A	1.3E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.5E-04	N/A	N/A	1.5E-04
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	2.6E-06	N/A	N/A	2.6E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	1.5E-03	N/A	N/A	1.5E-03
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	6.5E-02	N/A	N/A	6.5E-02
			SVOCs					**SVOCs**					
			Hexachlorobenzene	1.8E-11	N/A	2.8E-11	4.7E-11	Hexachlorobenzene	Liver	5.0E-07	N/A	7.8E-07	1.3E-06
			PAHs					**PAHs**					
			Benz(a)anthracene	1.2E-08	N/A	2.3E-08	3.5E-08	Benz(a)anthracene	Kidney	1.9E-05	N/A	3.7E-05	5.6E-05
			Benzo(a)pyrene	1.3E-07	N/A	2.6E-07	3.8E-07	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	1.3E-08	N/A	2.7E-08	4.1E-08	Benzo(b)fluoranthene	Kidney	2.2E-05	N/A	4.4E-05	6.5E-05
			Dibenz(a,h)anthracene	1.4E-08	N/A	2.8E-08	4.2E-08	Dibenz(a,h)anthracene	Kidney	2.2E-06	N/A	4.4E-06	6.6E-06
			Indeno(1,2,3-cd)pyrene	5.4E-09	N/A	1.1E-08	1.6E-08	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	5.2E-06	N/A	1.0E-05	1.6E-05
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	1.8E-05	N/A	3.6E-05	5.3E-05
			Pesticides					**Pesticides**					
			Heptachlor epoxide	7.7E-11	N/A	N/A	7.7E-11	Heptachlor epoxide	Liver	2.3E-05	N/A	N/A	2.3E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	N/A	N/A	N/A	N/A
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	N/A	N/A	N/A	N/A
			Total PCBs	N/A	N/A	N/A	N/A	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	2.0E-09	N/A	9.4E-10	2.9E-09	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Upper Geddes Brook Surface Sediment Total)		6.5E-07	N/A	5.7E-07	1.2E-06			1.2E-01	N/A	1.8E-02	1.3E-01
Sediment	Surface Sediment	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	7.1E-04	N/A	N/A	7.1E-04
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	2.0E-04	N/A	N/A	2.0E-04
			Arsenic	4.1E-08	N/A	1.9E-08	6.1E-08	Arsenic	Skin	3.2E-03	N/A	1.5E-03	4.7E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	9.8E-04	N/A	N/A	9.8E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	1.1E-05	N/A	N/A	1.1E-05

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	4.8E-03	N/A	N/A	4.8E-03
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	4.5E-03	N/A	N/A	4.5E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.9E-03	N/A	N/A	1.9E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	4.8E-06	N/A	N/A	4.8E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	1.8E-05	N/A	N/A	1.8E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	1.8E-03	N/A	N/A	1.8E-03
			SVOCs					**SVOCs**					
			Hexachlorobenzene	4.7E-09	N/A	7.3E-09	1.2E-08	Hexachlorobenzene	Liver	1.3E-04	N/A	2.0E-04	3.3E-04
			PAHs					**PAHs**					
			Benz(a)anthracene	3.5E-09	N/A	7.1E-09	1.1E-08	Benz(a)anthracene	Kidney	5.6E-06	N/A	1.1E-05	1.7E-05
			Benzo(a)pyrene	3.8E-08	N/A	7.6E-08	1.1E-07	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	6.6E-09	N/A	1.3E-08	2.0E-08	Benzo(b)fluoranthene	Kidney	1.1E-05	N/A	2.1E-05	3.2E-05
			Dibenz(a,h)anthracene	5.9E-09	N/A	1.2E-08	1.8E-08	Dibenz(a,h)anthracene	Kidney	9.5E-07	N/A	1.9E-06	2.9E-06
			Indeno(1,2,3-cd)pyrene	1.1E-09	N/A	2.1E-09	3.2E-09	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	1.0E-06	N/A	2.0E-06	3.0E-06
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	6.4E-06	N/A	1.3E-05	1.9E-05
			Pesticides					**Pesticides**					
			Heptachlor epoxide	1.4E-09	N/A	N/A	1.4E-09	Heptachlor epoxide	Liver	4.1E-04	N/A	N/A	4.1E-04
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	4.5E-04	N/A	9.8E-04	1.4E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	6.5E-04	N/A	1.4E-03	2.1E-03
			Total PCBs	1.1E-09	N/A	2.4E-09	3.5E-09	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	4.3E-09	N/A	2.0E-09	6.4E-09	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Lower Geddes Brook Surface Sediment Total)		1.1E-07	N/A	1.4E-07	2.5E-07			1.9E-02	N/A	3.2E-03	2.3E-02
Sediment	Surface Sediment	Upper Ninemile Creek											
			Inorganics					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.2E-03	N/A	N/A	1.2E-03
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	N/A	N/A	N/A	N/A
			Arsenic	3.3E-08	N/A	1.5E-08	4.9E-08	Arsenic	Skin	2.6E-03	N/A	1.2E-03	3.8E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	6.8E-04	N/A	N/A	6.8E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	7.7E-03	N/A	N/A	7.7E-03
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	4.6E-03	N/A	N/A	4.6E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	6.3E-05	N/A	N/A	6.3E-05
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	2.4E-06	N/A	N/A	2.4E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	1.5E-05	N/A	N/A	1.5E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			SVOCs					**SVOCs**					
			Hexachlorobenzene	N/A	N/A	N/A	N/A	Hexachlorobenzene	Liver	N/A	N/A	N/A	N/A
			PAHs					**PAHs**					
			Benz(a)anthracene	4.8E-10	N/A	9.8E-10	1.5E-09	Benz(a)anthracene	Kidney	7.7E-07	N/A	1.6E-06	2.3E-06
			Benzo(a)pyrene	4.8E-09	N/A	9.8E-09	1.5E-08	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	4.8E-10	N/A	9.8E-10	1.5E-09	Benzo(b)fluoranthene	Kidney	7.7E-07	N/A	1.6E-06	2.3E-06

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Dibenz(a,h)anthracene	N/A	N/A	N/A	N/A	Dibenz(a,h)anthracene	Kidney	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	3.2E-10	N/A	6.5E-10	9.8E-10	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	3.1E-07	N/A	6.3E-07	9.4E-07
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	7.3E-07	N/A	1.5E-06	2.2E-06
			Pesticides					**Pesticides**					
			Heptachlor epoxide	N/A	N/A	N/A	N/A	Heptachlor epoxide	Liver	N/A	N/A	N/A	N/A
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	N/A	N/A	N/A	N/A
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	N/A	N/A	N/A	N/A
			Total PCBs	N/A	N/A	N/A	N/A	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.7E-09	N/A	7.9E-10	2.5E-09	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Upper Ninemile Creek Surface Sediment Total)		4.1E-08	N/A	2.9E-08	7.0E-08			1.7E-02	N/A	1.2E-03	1.8E-02
Sediment	Surface Sediment	Lower Ninemile Creek	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	7.4E-04	N/A	N/A	7.4E-04
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	7.7E-05	N/A	N/A	7.7E-05
			Arsenic	3.7E-08	N/A	1.7E-08	5.4E-08	Arsenic	Skin	2.9E-03	N/A	1.3E-03	4.2E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	6.9E-04	N/A	N/A	6.9E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	1.6E-05	N/A	N/A	1.6E-05
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	5.3E-03	N/A	N/A	5.3E-03
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	2.5E-03	N/A	N/A	2.5E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	5.9E-03	N/A	N/A	5.9E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	4.7E-06	N/A	N/A	4.7E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	2.3E-05	N/A	N/A	2.3E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	2.0E-03	N/A	N/A	2.0E-03
			SVOCs					**SVOCs**					
			Hexachlorobenzene	1.9E-08	N/A	2.9E-08	4.8E-08	Hexachlorobenzene	Liver	5.1E-04	N/A	7.9E-04	1.3E-03
			PAHs					**PAHs**					
			Benz(a)anthracene	1.5E-09	N/A	3.0E-09	4.5E-09	Benz(a)anthracene	Kidney	2.4E-06	N/A	4.8E-06	7.2E-06
			Benzo(a)pyrene	1.5E-08	N/A	3.0E-08	4.5E-08	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	1.7E-09	N/A	3.3E-09	5.0E-09	Benzo(b)fluoranthene	Kidney	2.6E-06	N/A	5.3E-06	8.0E-06
			Dibenz(a,h)anthracene	3.5E-09	N/A	7.1E-09	1.1E-08	Dibenz(a,h)anthracene	Kidney	5.6E-07	N/A	1.1E-06	1.7E-06
			Indeno(1,2,3-cd)pyrene	7.5E-10	N/A	1.5E-09	2.3E-09	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	7.2E-07	N/A	1.5E-06	2.2E-06
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	3.3E-06	N/A	6.6E-06	9.9E-06
			Pesticides					**Pesticides**					
			Heptachlor epoxide	1.3E-10	N/A	N/A	1.3E-10	Heptachlor epoxide	Liver	3.8E-05	N/A	N/A	3.8E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	1.1E-03	N/A	2.4E-03	3.5E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	9.3E-04	N/A	2.0E-03	2.9E-03
			Total PCBs	1.8E-09	N/A	3.9E-09	5.7E-09	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	6.4E-09	N/A	3.0E-09	9.4E-09	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Lower Ninemile Creek Surface Sediment Total)		8.6E-08	N/A	9.8E-08	1.8E-07			2.2E-02	N/A	4.2E-03	2.6E-02
				Total Risk Across Surface Sediment			1.7E-06					Total Hazard Across Surface Sediment	0.20

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Surface & Subsurface Sediment	Upper Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	9.3E-04	N/A	N/A	9.3E-04
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	3.6E-03	N/A	N/A	3.6E-03
			Arsenic	4.8E-07	N/A	2.2E-07	7.1E-07	Arsenic	Skin	3.7E-02	N/A	1.7E-02	5.5E-02
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	6.1E-04	N/A	N/A	6.1E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	5.6E-03	N/A	N/A	5.6E-03
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	1.5E-03	N/A	N/A	1.5E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.4E-04	N/A	N/A	1.4E-04
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	1.5E-06	N/A	N/A	1.5E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	1.5E-03	N/A	N/A	1.5E-03
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	6.5E-02	N/A	N/A	6.5E-02
			SVOCs					**SVOCs**					
			Hexachlorobenzene	1.5E-11	N/A	2.3E-11	3.7E-11	Hexachlorobenzene	Liver	4.0E-07	N/A	6.2E-07	1.0E-06
			PAHs					**PAHs**					
			Benz(a)anthracene	1.2E-08	N/A	2.3E-08	3.5E-08	Benz(a)anthracene	Kidney	1.9E-05	N/A	3.7E-05	5.6E-05
			Benzo(a)pyrene	1.3E-07	N/A	2.6E-07	3.8E-07	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	1.3E-08	N/A	2.7E-08	4.1E-08	Benzo(b)fluoranthene	Kidney	2.2E-05	N/A	4.4E-05	6.5E-05
			Dibenz(a,h)anthracene	1.4E-08	N/A	2.8E-08	4.2E-08	Dibenz(a,h)anthracene	Kidney	2.2E-06	N/A	4.4E-06	6.6E-06
			Indeno(1,2,3-cd)pyrene	5.4E-09	N/A	1.1E-08	1.6E-08	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	5.2E-06	N/A	1.0E-05	1.6E-05
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	1.8E-05	N/A	3.6E-05	5.3E-05
			Pesticides					**Pesticides**					
			Dieldrin	N/A	N/A	N/A	N/A	Dieldrin	Liver	N/A	N/A	N/A	N/A
			Heptachlor epoxide	7.7E-11	N/A	N/A	7.7E-11	Heptachlor epoxide	Liver	2.3E-05	N/A	N/A	2.3E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	2.0E-04	N/A	4.3E-04	6.3E-04
			Aroclor 1260	N/A	N/A	N/A	N/A	Aroclor 1260	Assumed same as Ar 1254	N/A	N/A	N/A	N/A
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	N/A	N/A	N/A	N/A
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	2.0E-04	N/A	4.3E-04	6.3E-04
			Total PCBs	2.8E-10	N/A	6.1E-10	8.8E-10	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.5E-09	N/A	7.0E-10	2.2E-09	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
	(Upper Geddes Brook Surface & Subsurface Sediment Total)			6.5E-07	N/A	5.7E-07	1.2E-06			1.2E-01	N/A	1.8E-02	1.3E-01
Sediment	Surface & Subsurface Sediment	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	9.7E-04	N/A	N/A	9.7E-04
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	2.3E-04	N/A	N/A	2.3E-04
			Arsenic	4.4E-08	N/A	2.0E-08	6.4E-08	Arsenic	Skin	3.4E-03	N/A	1.6E-03	5.0E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	1.1E-03	N/A	N/A	1.1E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	4.6E-06	N/A	N/A	4.6E-06
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	5.7E-03	N/A	N/A	5.7E-03

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	4.6E-03	N/A	N/A	4.6E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	2.6E-03	N/A	N/A	2.6E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	3.9E-06	N/A	N/A	3.9E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	2.1E-05	N/A	N/A	2.1E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	1.9E-03	N/A	N/A	1.9E-03
			SVOCs					**SVOCs**					
			Hexachlorobenzene	1.6E-07	N/A	2.4E-07	4.0E-07	Hexachlorobenzene	Liver	4.3E-03	N/A	6.7E-03	1.1E-02
			PAHs					**PAHs**					
			Benz(a)anthracene	2.2E-09	N/A	4.4E-09	6.5E-09	Benz(a)anthracene	Kidney	3.4E-06	N/A	7.0E-06	1.0E-05
			Benzo(a)pyrene	1.9E-08	N/A	3.8E-08	5.6E-08	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	3.1E-09	N/A	6.2E-09	9.3E-09	Benzo(b)fluoranthene	Kidney	4.9E-06	N/A	9.9E-06	1.5E-05
			Dibenz(a,h)anthracene	6.8E-09	N/A	1.4E-08	2.0E-08	Dibenz(a,h)anthracene	Kidney	1.1E-06	N/A	2.2E-06	3.3E-06
			Indeno(1,2,3-cd)pyrene	1.1E-09	N/A	2.2E-09	3.3E-09	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	1.0E-06	N/A	2.1E-06	3.2E-06
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	5.5E-06	N/A	1.1E-05	1.7E-05
			Pesticides					**Pesticides**					
			Dieldrin	9.4E-10	N/A	N/A	9.4E-10	Dieldrin	Liver	4.1E-05	N/A	N/A	4.1E-05
			Heptachlor epoxide	2.1E-09	N/A	N/A	2.1E-09	Heptachlor epoxide	Liver	6.3E-04	N/A	N/A	6.3E-04
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	5.6E-02	N/A	1.2E-01	1.8E-01
			Aroclor 1260	N/A	N/A	N/A	N/A	Aroclor 1260	Assumed same as Ar 1254	6.8E-03	N/A	1.5E-02	2.2E-02
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	2.2E-02	N/A	4.7E-02	6.9E-02
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	5.6E-02	N/A	1.2E-01	1.8E-01
			Total PCBs	1.3E-07	N/A	2.9E-07	4.2E-07	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	2.5E-08	N/A	1.2E-08	3.7E-08	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
	(Lower Geddes Brook Surface & Subsurface Sediment Total)			3.9E-07	N/A	6.3E-07	1.0E-06			8.2E-02	N/A	1.3E-01	2.1E-01
Sediment	Surface & Subsurface Sediment	Upper Ninemile Creek											
			Inorganics					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.2E-03	N/A	N/A	1.2E-03
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	N/A	N/A	N/A	N/A
			Arsenic	3.3E-08	N/A	1.5E-08	4.9E-08	Arsenic	Skin	2.6E-03	N/A	1.2E-03	3.8E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	6.8E-04	N/A	N/A	6.8E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	7.7E-03	N/A	N/A	7.7E-03
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	3.8E-03	N/A	N/A	3.8E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	6.3E-05	N/A	N/A	6.3E-05
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	2.4E-06	N/A	N/A	2.4E-06
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	1.5E-05	N/A	N/A	1.5E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			SVOCs					**SVOCs**					
			Hexachlorobenzene	N/A	N/A	N/A	N/A	Hexachlorobenzene	Liver	N/A	N/A	N/A	N/A

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			PAHs					**PAHs**					
			Benz(a)anthracene	4.8E-10	N/A	9.8E-10	1.5E-09	Benz(a)anthracene	Kidney	7.7E-07	N/A	1.6E-06	2.3E-06
			Benzo(a)pyrene	4.8E-09	N/A	9.8E-09	1.5E-08	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	4.8E-10	N/A	9.8E-10	1.5E-09	Benzo(b)fluoranthene	Kidney	7.7E-07	N/A	1.6E-06	2.3E-06
			Dibenz(a,h)anthracene	N/A	N/A	N/A	N/A	Dibenz(a,h)anthracene	Kidney	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	3.2E-10	N/A	6.5E-10	9.8E-10	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	3.1E-07	N/A	6.3E-07	9.4E-07
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	7.3E-07	N/A	1.5E-06	2.2E-06
			Pesticides					**Pesticides**					
			Dieldrin	N/A	N/A	N/A	N/A	Dieldrin	Liver	N/A	N/A	N/A	N/A
			Heptachlor epoxide	N/A	N/A	N/A	N/A	Heptachlor epoxide	Liver	N/A	N/A	N/A	N/A
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	N/A	N/A	N/A	N/A
			Aroclor 1260	N/A	N/A	N/A	N/A	Aroclor 1260	Assumed same as Ar 1254	N/A	N/A	N/A	N/A
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	N/A	N/A	N/A	N/A
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	N/A	N/A	N/A	N/A
			Total PCBs	N/A	N/A	N/A	N/A	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.7E-09	N/A	7.9E-10	2.5E-09	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
	(Upper Ninemile Creek Surface & Subsurface Sediment Total)			4.1E-08	N/A	2.9E-08	7.0E-08			1.6E-02	N/A	1.2E-03	1.7E-02
Sediment	Surface & Subsurface Sediment	Lower Ninemile Creek	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	7.2E-04	N/A	N/A	7.2E-04
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	8.7E-05	N/A	N/A	8.7E-05
			Arsenic	6.7E-08	N/A	3.1E-08	9.8E-08	Arsenic	Skin	5.2E-03	N/A	2.4E-03	7.6E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	7.3E-04	N/A	N/A	7.3E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	6.1E-06	N/A	N/A	6.1E-06
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	5.6E-03	N/A	N/A	5.6E-03
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	2.3E-03	N/A	N/A	2.3E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	7.7E-03	N/A	N/A	7.7E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	1.2E-05	N/A	N/A	1.2E-05
			Selenium	N/A	N/A	N/A	N/A	Selenium	Whole Body	2.0E-05	N/A	N/A	2.0E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	1.8E-03	N/A	N/A	1.8E-03
			SVOCs					**SVOCs**					
			Hexachlorobenzene	1.4E-08	N/A	2.2E-08	3.6E-08	Hexachlorobenzene	Liver	3.9E-04	N/A	6.0E-04	9.8E-04
			PAHs					**PAHs**					
			Benz(a)anthracene	1.1E-09	N/A	2.3E-09	3.4E-09	Benz(a)anthracene	Kidney	1.8E-06	N/A	3.6E-06	5.4E-06
			Benzo(a)pyrene	9.2E-09	N/A	1.9E-08	2.8E-08	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	1.3E-09	N/A	2.5E-09	3.8E-09	Benzo(b)fluoranthene	Kidney	2.0E-06	N/A	4.1E-06	6.1E-06
			Dibenz(a,h)anthracene	4.4E-09	N/A	8.9E-09	1.3E-08	Dibenz(a,h)anthracene	Kidney	7.1E-07	N/A	1.4E-06	2.1E-06
			Indeno(1,2,3-cd)pyrene	5.7E-10	N/A	1.2E-09	1.7E-09	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	5.5E-07	N/A	1.1E-06	1.7E-06
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	3.0E-06	N/A	6.0E-06	9.0E-06

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Pesticides					**Pesticides**					
			Dieldrin	5.0E-10	N/A	N/A	5.0E-10	Dieldrin	Liver	2.2E-05	N/A	N/A	2.2E-05
			Heptachlor epoxide	1.1E-10	N/A	N/A	1.1E-10	Heptachlor epoxide	Liver	3.3E-05	N/A	N/A	3.3E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	2.2E-03	N/A	4.9E-03	7.1E-03
			Aroclor 1260	N/A	N/A	N/A	N/A	Aroclor 1260	Assumed same as Ar 1254	N/A	N/A	N/A	N/A
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	2.6E-03	N/A	5.7E-03	8.3E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	1.5E-03	N/A	3.2E-03	4.6E-03
			Total PCBs	2.1E-09	N/A	4.7E-09	6.8E-09	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.4E-08	N/A	6.5E-09	2.0E-08	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
	(Lower Ninemile Creek Surface & Subsurface Sediment Total)			1.1E-07	N/A	9.8E-08	2.1E-07			2.6E-02	N/A	6.2E-03	3.2E-02
			Total Risk Across Surface & Subsurface Sediment				2.5E-06		Total Hazard Across Surface & Subsurface Sediment				0.40
Soil	Surface Soil	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.5E-03	N/A	N/A	1.5E-03
			Arsenic	3.7E-08	N/A	1.7E-08	5.4E-08	Arsenic	Skin	2.9E-03	N/A	1.3E-03	4.2E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	9.2E-04	N/A	N/A	9.2E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	7.3E-03	N/A	N/A	7.3E-03
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	2.2E-03	N/A	N/A	2.2E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	6.0E-03	N/A	N/A	6.0E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	5.9E-06	N/A	N/A	5.9E-06
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			SVOCs					**SVOCs**					
			3-Nitroaniline	N/A	N/A	N/A	N/A	3-Nitroaniline	Blood	N/A	N/A	N/A	N/A
			Hexachlorobenzene	9.7E-09	N/A	1.5E-08	2.5E-08	Hexachlorobenzene	Liver	2.7E-04	N/A	4.1E-04	6.8E-04
			PAHs					**PAHs**					
			Benz(a)anthracene	1.4E-08	N/A	2.7E-08	4.1E-08	Benz(a)anthracene	Kidney	2.2E-05	N/A	4.4E-05	6.6E-05
			Benzo(a)pyrene	1.6E-07	N/A	3.3E-07	4.9E-07	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	1.0E-08	N/A	2.1E-08	3.2E-08	Benzo(b)fluoranthene	Kidney	1.7E-05	N/A	3.4E-05	5.1E-05
			Benzo(g,h,i)perylene	N/A	N/A	N/A	N/A	Benzo(g,h,i)perylene	Kidney	5.3E-06	N/A	1.1E-05	1.6E-05
			Benzo(k)fluoranthene	7.5E-10	N/A	1.5E-09	2.3E-09	Benzo(k)fluoranthene	Kidney	1.2E-05	N/A	2.4E-05	3.6E-05
			Dibenz(a,h)anthracene	4.7E-09	N/A	9.6E-09	1.4E-08	Dibenz(a,h)anthracene	Kidney	7.6E-07	N/A	1.5E-06	2.3E-06
			Indeno(1,2,3-cd)pyrene	4.2E-09	N/A	8.6E-09	1.3E-08	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	4.1E-06	N/A	8.2E-06	1.2E-05
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	2.9E-05	N/A	5.9E-05	8.9E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	8.4E-04	N/A	1.8E-03	2.7E-03
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	1.3E-03	N/A	2.9E-03	4.2E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	1.5E-03	N/A	3.3E-03	4.8E-03
			Total PCBs	2.9E-09	N/A	6.3E-09	9.1E-09	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.1E-08	N/A	5.1E-09	1.6E-08	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Lower Geddes Brook Surface Soil Total)		2.6E-07	N/A	4.4E-07	6.9E-07			2.3E-02	N/A	5.2E-03	2.8E-02

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Lower Ninemile Creek	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.1E-03	N/A	N/A	1.1E-03
			Arsenic	4.4E-08	N/A	2.0E-08	6.4E-08	Arsenic	Skin	3.4E-03	N/A	1.6E-03	5.0E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	1.0E-03	N/A	N/A	1.0E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	5.3E-06	N/A	N/A	5.3E-06
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	7.5E-03	N/A	N/A	7.5E-03
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	2.4E-03	N/A	N/A	2.4E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.2E-03	N/A	N/A	1.2E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	3.6E-05	N/A	N/A	3.6E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	1.3E-03	N/A	N/A	1.3E-03
			SVOCs					**SVOCs**					
			3-Nitroaniline	4.7E-11	N/A	7.3E-11	1.2E-10	3-Nitroaniline	Blood	2.6E-04	N/A	4.1E-04	6.7E-04
			Hexachlorobenzene	1.8E-09	N/A	2.9E-09	4.7E-09	Hexachlorobenzene	Liver	5.1E-05	N/A	7.9E-05	1.3E-04
			PAHs					**PAHs**					
			Benz(a)anthracene	4.5E-09	N/A	9.2E-09	1.4E-08	Benz(a)anthracene	Kidney	7.3E-06	N/A	1.5E-05	2.2E-05
			Benzo(a)pyrene	4.3E-08	N/A	8.6E-08	1.3E-07	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	2.0E-09	N/A	4.1E-09	6.1E-09	Benzo(b)fluoranthene	Kidney	3.2E-06	N/A	6.5E-06	9.7E-06
			Benzo(g,h,i)perylene	N/A	N/A	N/A	N/A	Benzo(g,h,i)perylene	Kidney	3.9E-06	N/A	7.8E-06	1.2E-05
			Benzo(k)fluoranthene	3.5E-10	N/A	7.0E-10	1.0E-09	Benzo(k)fluoranthene	Kidney	5.5E-06	N/A	1.1E-05	1.7E-05
			Dibenz(a,h)anthracene	1.0E-08	N/A	2.0E-08	3.0E-08	Dibenz(a,h)anthracene	Kidney	1.6E-06	N/A	3.2E-06	4.8E-06
			Indeno(1,2,3-cd)pyrene	2.4E-09	N/A	4.9E-09	7.3E-09	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	2.3E-06	N/A	4.7E-06	7.0E-06
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	1.0E-05	N/A	2.1E-05	3.1E-05
			PCBs					**PCBs**					
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	2.6E-04	N/A	5.6E-04	8.2E-04
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	4.7E-04	N/A	1.0E-03	1.5E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	7.5E-04	N/A	1.6E-03	2.4E-03
			Total PCBs	9.5E-10	N/A	2.1E-09	3.0E-09	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	5.5E-09	N/A	2.6E-09	8.1E-09	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
			(Lower Ninemile Creek Surface Soil Total)	1.1E-07	N/A	1.5E-07	2.7E-07			1.9E-02	N/A	3.8E-03	2.3E-02
						Total Risk Across Surface Soil	9.6E-07					Total Hazard Across Surface Soil	5.1E-02
Soil	Surface & Subsurface Soil	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.6E-03	N/A	N/A	1.6E-03
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	7.1E-05	N/A	N/A	7.1E-05
			Arsenic	3.8E-08	N/A	1.7E-08	5.5E-08	Arsenic	Skin	2.9E-03	N/A	1.4E-03	4.3E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	9.3E-04	N/A	N/A	9.3E-04
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	N/A	N/A	N/A	N/A
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	8.8E-03	N/A	N/A	8.8E-03
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	2.2E-03	N/A	N/A	2.2E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.0E-02	N/A	N/A	1.0E-02
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	5.9E-06	N/A	N/A	5.9E-06
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			SVOCs					**SVOCs**					
			3-Nitroaniline	N/A	N/A	N/A	N/A	3-Nitroaniline	Blood	N/A	N/A	N/A	N/A
			Hexachlorobenzene	8.9E-09	N/A	1.4E-08	2.3E-08	Hexachlorobenzene	Liver	2.4E-04	N/A	3.8E-04	6.2E-04
			N-nitroso-di-n-propylamine	N/A	N/A	N/A	N/A	N-nitroso-di-n-propylamine	N/A	N/A	N/A	N/A	N/A
			PAHs					**PAHs**					
			Benz(a)anthracene	1.0E-08	N/A	2.1E-08	3.1E-08	Benz(a)anthracene	Kidney	1.7E-05	N/A	3.3E-05	5.0E-05
			Benzo(a)pyrene	1.1E-07	N/A	2.2E-07	3.3E-07	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	6.3E-09	N/A	1.3E-08	1.9E-08	Benzo(b)fluoranthene	Kidney	1.0E-05	N/A	2.0E-05	3.1E-05
			Benzo(g,h,i)perylene	N/A	N/A	N/A	N/A	Benzo(g,h,i)perylene	Kidney	3.8E-06	N/A	7.7E-06	1.2E-05
			Benzo(k)fluoranthene	3.8E-10	N/A	7.7E-10	1.1E-09	Benzo(k)fluoranthene	Kidney	6.1E-06	N/A	1.2E-05	1.8E-05
			Dibenz(a,h)anthracene	4.7E-09	N/A	9.6E-09	1.4E-08	Dibenz(a,h)anthracene	Kidney	7.6E-07	N/A	1.5E-06	2.3E-06
			Indeno(1,2,3-cd)pyrene	3.2E-09	N/A	6.5E-09	9.7E-09	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	3.1E-06	N/A	6.2E-06	9.3E-06
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	2.2E-05	N/A	4.5E-05	6.7E-05
			PCBs					**PCBs**					
			Aroclor 1248	N/A	N/A	N/A	N/A	Aroclor 1248	Assumed same as Ar 1254	1.3E-03	N/A	2.8E-03	4.1E-03
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	8.4E-04	N/A	1.8E-03	2.7E-03
			Aroclor 1260	N/A	N/A	N/A	N/A	Aroclor 1260	Assumed same as Ar 1254	N/A	N/A	N/A	N/A
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	1.6E-03	N/A	3.4E-03	5.0E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	2.5E-03	N/A	5.5E-03	8.0E-03
			Total PCBs	4.0E-09	N/A	8.6E-09	1.3E-08	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.6E-08	N/A	7.4E-09	2.3E-08	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Lower Geddes Brook Surface & Subsurface Soil Total)		2.0E-07	N/A	3.2E-07	5.2E-07			2.9E-02	N/A	7.3E-03	3.7E-02
Soil	Surface & Subsurface Soil	Lower Ninemile Creek											
			Inorganics					**Inorganics**					
			Aluminum	N/A	N/A	N/A	N/A	Aluminum	Neurotoxicity	1.1E-03	N/A	N/A	1.1E-03
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	7.1E-04	N/A	N/A	7.1E-04
			Arsenic	4.3E-08	N/A	2.0E-08	6.4E-08	Arsenic	Skin	3.4E-03	N/A	1.6E-03	4.9E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	1.0E-03	N/A	N/A	1.0E-03
			Cyanide	N/A	N/A	N/A	N/A	Cyanide	Whole Body/Blood	5.3E-06	N/A	N/A	5.3E-06
			Iron	N/A	N/A	N/A	N/A	Iron	Liver, spleen, blood	7.1E-03	N/A	N/A	7.1E-03
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	2.1E-03	N/A	N/A	2.1E-03
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.5E-03	N/A	N/A	1.5E-03
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	3.6E-05	N/A	N/A	3.6E-05
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	1.2E-03	N/A	N/A	1.2E-03
			SVOCs					**SVOCs**					
			3-Nitroaniline	4.5E-11	N/A	7.0E-11	1.1E-10	3-Nitroaniline	Blood	2.5E-04	N/A	3.9E-04	6.4E-04
			Hexachlorobenzene	2.2E-09	N/A	3.4E-09	5.6E-09	Hexachlorobenzene	Liver	6.0E-05	N/A	9.3E-05	1.5E-04
			N-nitroso-di-n-propylamine	1.6E-09	N/A	2.5E-09	4.2E-09	N-nitroso-di-n-propylamine	N/A	N/A	N/A	N/A	N/A
			PAHs					**PAHs**					
			Benz(a)anthracene	5.1E-09	N/A	1.0E-08	1.5E-08	Benz(a)anthracene	Kidney	8.2E-06	N/A	1.6E-05	2.5E-05
			Benzo(a)pyrene	4.6E-08	N/A	9.2E-08	1.4E-07	Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
			Benzo(b)fluoranthene	1.7E-09	N/A	3.5E-09	5.2E-09	Benzo(b)fluoranthene	Kidney	2.7E-06	N/A	5.5E-06	8.3E-06
			Benzo(g,h,i)perylene	N/A	N/A	N/A	N/A	Benzo(g,h,i)perylene	Kidney	3.3E-06	N/A	6.7E-06	1.0E-05
			Benzo(k)fluoranthene	3.8E-10	N/A	7.7E-10	1.2E-09	Benzo(k)fluoranthene	Kidney	6.1E-06	N/A	1.2E-05	1.8E-05
			Dibenz(a,h)anthracene	1.1E-08	N/A	2.3E-08	3.4E-08	Dibenz(a,h)anthracene	Kidney	1.8E-06	N/A	3.7E-06	5.5E-06

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Indeno(1,2,3-cd)pyrene	2.7E-09	N/A	5.4E-09	8.0E-09	Indeno(1,2,3-cd)pyrene	Reduced Body Weight	2.6E-06	N/A	5.2E-06	7.7E-06
			Phenanthrene	N/A	N/A	N/A	N/A	Phenanthrene	Kidney	1.3E-05	N/A	2.5E-05	3.8E-05
			PCBs					**PCBs**					
			Aroclor 1248	N/A	N/A	N/A	N/A	Aroclor 1248	Assumed same as Ar 1254	5.6E-04	N/A	1.2E-03	1.8E-03
			Aroclor 1254	N/A	N/A	N/A	N/A	Aroclor 1254	Immune System	3.9E-04	N/A	8.4E-04	1.2E-03
			Aroclor 1260	N/A	N/A	N/A	N/A	Aroclor 1260	Assumed same as Ar 1254	3.8E-04	N/A	8.4E-04	1.2E-03
			Aroclor 1268	N/A	N/A	N/A	N/A	Aroclor 1268	Assumed same as Ar 1254	7.2E-04	N/A	1.6E-03	2.3E-03
			Sum of Highly Chlorinated PCBs	N/A	N/A	N/A	N/A	Sum of Highly Chlorinated PCBs	Immune System (Ar 1254)	5.6E-04	N/A	1.2E-03	1.8E-03
			Total PCBs	1.3E-09	N/A	2.9E-09	4.2E-09	Total PCBs	N/A	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	4.7E-09	N/A	2.2E-09	6.8E-09	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
	(Lower Ninemile Creek Surface & Subsurface Soil Total)			1.2E-07	N/A	1.7E-07	2.9E-07			1.9E-02	N/A	3.3E-03	2.2E-02
			Total Risk Across Surface & Subsurface Soil				8.0E-07	Total Hazard Across Surface & Subsurface Soil					0.06
Water	Surface Water	Upper Geddes Brook	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	1.8E-05	N/A	5.6E-05	7.3E-05
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	N/A	N/A	N/A	N/A
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	N/A	N/A	N/A	N/A
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	1.0E-06	N/A	1.2E-05	1.3E-05
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	5.2E-08	N/A	3.5E-07	4.0E-07
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	3.4E-09	N/A	N/A	3.4E-09
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	1.9E-10	N/A	2.7E-07	2.7E-07	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
	(Upper Geddes Brook Surface Water Total)			1.9E-10	N/A	2.7E-07	2.7E-07			1.9E-05	N/A	6.8E-05	8.7E-05
Water	Surface Water	Lower Geddes Brook	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	1.6E-05	N/A	5.2E-05	6.8E-05
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	N/A	N/A	N/A	N/A
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	5.9E-06	N/A	2.2E-04	2.3E-04
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	4.1E-06	N/A	4.8E-05	5.2E-05
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	3.8E-06	N/A	2.6E-05	2.9E-05
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	4.9E-08	N/A	N/A	4.9E-08
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	5.2E-04	N/A	2.5E-04	7.7E-04
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
	(Lower Geddes Brook Surface Water Total)			0.0E+00	N/A	0.0E+00	0.0E+00			5.5E-04	N/A	6.0E-04	1.1E-03

TABLE 9.4.RME
Summary of Receptor Risks and Hazards for COPCs
Construction Worker: Reasonable Maximum Exposure Construction Worker
Geddes Brook/Ninemile Creek

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Water	Surface Water	Upper Ninemile Creek	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	2.0E-05	N/A	6.3E-05	8.3E-05
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	5.1E-05	N/A	9.7E-04	1.0E-03
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	9.6E-06	N/A	3.7E-04	3.8E-04
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	3.7E-06	N/A	4.4E-05	4.8E-05
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	1.5E-07	N/A	1.0E-06	1.2E-06
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	1.2E-08	N/A	N/A	1.2E-08
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Upper Ninemile Creek Surface Water Total)		0.0E+00	N/A	0.0E+00	0.0E+00			8.4E-05	N/A	1.4E-03	1.5E-03
Water	Surface Water	Lower Ninemile Creek	**Inorganics**					**Inorganics**					
			Antimony	N/A	N/A	N/A	N/A	Antimony	Whole Body/Blood	2.0E-05	N/A	6.3E-05	8.3E-05
			Cadmium	N/A	N/A	N/A	N/A	Cadmium	Kidneys	1.5E-05	N/A	2.9E-04	3.0E-04
			Chromium	N/A	N/A	N/A	N/A	Chromium	NOAEL	7.9E-06	N/A	3.0E-04	3.1E-04
			Lead	N/A	N/A	N/A	N/A	Lead	CNS, blood, whole body	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	N/A	Manganese	CNS	4.8E-06	N/A	5.7E-05	6.2E-05
			Mercury	N/A	N/A	N/A	N/A	Mercury	Immune System	8.1E-07	N/A	5.5E-06	6.3E-06
			Methylmercury	N/A	N/A	N/A	N/A	Methylmercury	DNI	2.5E-08	N/A	N/A	2.5E-08
			Thallium	N/A	N/A	N/A	N/A	Thallium	NOAEL; various	N/A	N/A	N/A	N/A
			Dioxins and Furans					**Dioxins and Furans**					
			TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	TEQ (as 2,3,7,8-TCDD)	N/A	N/A	N/A	N/A	N/A
		(Lower Ninemile Creek Surface Water Total)		0.0E+00	N/A	0.0E+00	0.0E+00			4.9E-05	N/A	7.1E-04	7.6E-04
						Total Risk Across Surface Water	2.7E-07					Total Hazard Across Surface Water	0.0
						Total Risk Across All Media and All Exposure Routes	3.6E-06					Total Hazard Index Across All Media and All Exposure Routes	0.5

Total [Lungs] HI =	0.00	Total [DNI] HI =	0.00	Total [Kidney] HI =	0.00	Total [Blood] HI =	0.05
Total [Immune System] HI =	0.22	Total [Birth Weight] HI =	0.00	Total [CNS] HI =	0.02	Total [Body Weight] HI =	0.00
Total [Skin] HI =	0.08	Total [NOAEL] HI =	0.08	Total [Liver] HI =	0.06	Total [Whole Body] HI =	0.01

Notes: Based on an exposure of 30 years the carcinogenic risk is 2E-03.
N/A = Risk or hazard not calculated
Primary Target Organ for Aroclor 1254 is Immune System.
Target Organ Totals: DNI: Developmental Neuropsychological Impairment
NOAEL : No Observed Adverse Effect Level
CNS: Central Nervous System

Table ES-4. Hazard Quotients for Measured Geddes Brook/Ninemile Creek Fish Concentrations

COC	Bluegill 95%UCL HQ NOAEL	Bluegill 95%UCL HQ LOAEL	Bluegill Mean HQ (NOAEL)	Bluegill Mean HQ (LOAEL)	Brook Trout 95%UCL HQ (NOAEL)	Brook Trout 95%UCL HQ (LOAEL)	Brook Trout Mean HQ (NOAEL)	Brook Trout Mean HQ (LOAEL)
Metals								
Arsenic	**1.2**	0.5	**1.4**	0.5	ND	ND	ND	ND
Mercury	**1.9**	0.6	**1.6**	0.5	**2.1**	0.7	**1.5**	0.5
Methylmercury	**4.5**	**1.5**	**2.5**	0.8	**4.2**	**1.4**	**1.5**	0.5
Selenium	**12**	**1.2**	**7.3**	0.7	**11**	**1.1**	**9.0**	**9.0**
Zinc	**4.0**	**3.4**	**1.3**	**1.1**	**1.2**	**1.0**	0.8	0.8
Pesticides/Polychlorinated Biphenyls								
DDT and metabolites	2.2E-02	4.6E-03	2.0E-02	4.1E-03	2.3E-02	4.8E-03	1.2E-02	1.2E-02
PCBs (Sum)	0.2	3.1E-02	0.1	2.9E-02	0.2	3.2E-02	0.1	6.3E-02
Dioxin/Furans								
PCDD/PCDFs (TEQ) Fish	0.8	0.4	0.6	0.3	0.4	0.2	0.2	0.2

Notes: NA = Not Available; NS = Not selected as a COC for this receptor.
Hazard quotients equal to or greater than one are outlined and bolded.

Table ES-4. (cont.)

COC	Smallmouth Bass 95%UCL HQ NOAEL	Smallmouth Bass 95%UCL HQ LOAEL	Smallmouth Bass Mean HQ NOAEL	Smallmouth Bass Mean HQ LOAEL	White Sucker 95%UCL HQ (NOAEL)	White Sucker 95%UCL HQ (LOAEL)	White Sucker Mean HQ (NOAEL)	White Sucker Mean HQ (LOAEL)
Metals								
Arsenic	**2.2**	0.8	0.9	0.3	**1.3**	0.5	0.6	0.2
Mercury	**7.5**	**2.5**	**7.5**	**2.5**	**7.5**	**2.5**	**7.5**	**2.5**
Methylmercury	**28**	**9.4**	**16**	**5.2**	**4.4**	**1.5**	**3.2**	**1.1**
Selenium	**17**	**1.7**	**10**	**1.0**	**12**	**1.2**	**7.7**	0.8
Zinc	**1.2**	1.0	0.5	0.4	0.5	0.5	0.5	0.4
Pesticides/Polychlorinated Biphenyls								
DDT and metabolites	0.1	2.6E-02	4.4E-02	9.1E-03	1.6E-02	3.4E-03	7.3E-03	1.5E-03
PCBs (Sum)	0.3	0.1	0.2	0.0	0.2	4.4E-02	0.1	1.2E-02
Dioxin/Furans								
PCDD/PCDFs (TEQ) Fish	**1.2**	0.6	0.7	0.3	**4.1**	**2.0**	0.6	0.3

Table ES-5. Hazard Quotients for Modeled Avian Exposure

	Tree Swallow				Belted Kingfisher				Great Blue Heron				Red-Tailed Hawk			
	95% UCL HQ		Mean HQ		95% UCL HQ		Mean HQ		95% UCL HQ		Mean HQ		95% UCL HQ		Mean HQ	
COC	NOAEL	LOAEL	NOAEL	LOAEL	NOAEL	LOAEL	NOAEL	LOAEL	NOAEL	LOAEL	NOAEL	LOAEL	NOAEL	LOAEL	NOAEL	LOAEL
Total Metals																
Arsenic	7.2E-04	2.4E-04	0.1	4.2E-02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Barium	1.6E-02	8.0E-03	1.6E-02	7.8E-03	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chromium	0.2	3.5E-02	0.2	3.4E-02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Copper	3.5E-02	2.7E-02	3.4E-02	2.6E-02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Lead	0.6	6.4E-02	0.5	5.2E-02	NS	NS	NS	NS	NS	NS	NS	NS	0.3	2.8E-02	0.3	2.7E-02
Methylmercury	0.2	2.0E-02	0.2	1.7E-02	**70**	**7.0**	**21**	**2.1**	**38**	**3.8**	**17**	**1.7**	**1.6**	0.2	**1.1**	0.1
Mercury	**6.2**	**3.1**	**2.9**	**1.4**	0.5	0.2	0.3	0.1	0.2	0.1	0.2	0.1	0.7	0.3	0.5	0.3
Nickel	3.3E-03	2.4E-03	3.3E-03	2.4E-03	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Selenium	0.2	0.1	0.3	0.1	**1.2**	0.6	0.98	0.5	NS	NS	NS	NS	NS	NS	NS	NS
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
Zinc	0.1	1.3E-02	0.1	1.3E-02	**2.6**	0.3	**2.0**	0.2	0.5	0.1	0.4	0.0	NS	NS	NS	NS
Semivolatile Organic Compounds																
Hexachlorobenzene	**8.8**	0.9	**3.2**	0.3	NS	NS	NS	NS	NS	NS	NS	NS	0.2	1.5E-02	0.1	7.1E-03
Polycyclic aromatic hydrocarbons	**33**	**3.3**	**7.8**	0.8	NS	NS	NS	NS	NS	NS	NS	NS	**10**	**1.0**	**7.8**	0.8
Pesticides/Polychlorinated Biphenyls																
DDT and metabolites	NS	NS	NS	NS	**3.0**	0.3	**2.6**	0.3	**9.1**	0.9	**11**	**1.1**	0.1	8.8E-03	0.1	7.4E-03
Dieldrin	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.2E-03	2.2E-04	2.1E-03	2.1E-04
Endrin	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.9E-02	2.9E-03	2.5E-02	2.5E-03
Polychlorinated biphenyls (PCBs)	0.6	5.7E-02	0.6	5.6E-02	1.0	0.1	0.9	0.1	0.7	6.8E-02	0.8	7.6E-02	4.1E-02	4.1E-03	3.6E-02	3.6E-03
Dioxins/Furans																
PCDD/PCDFs (TEQ) avian	0.8	7.6E-02	0.3	2.7E-02	0.3	2.7E-02	0.2	2.1E-02	NS	NS	NS	NS	0.1	6.7E-03	4.5E-02	4.5E-03

Notes: NA = Not Available; NS = Not selected as a COC for this receptor.

Hazard quotients equal to or greater than one are outlined and bolded.

Table ES-6. Hazard Quotients for Modeled Mammalian Exposure

	Little Brown Bat				Mink				River Otter			
	95% UCL HQ		Mean HQ		95% UCL HQ		Mean HQ		95% UCL HQ		Mean HQ	
COC	NOAEL/LOAEL		NOAEL/LOAEL		NOAEL/LOAEL		NOAEL/LOAEL		NOAEL/LOAEL		NOAEL/LOAEL	
Total Metals												
Arsenic	**1.0**	0.1	0.95	0.1	0.7	0.1	0.6	0.1	0.7	6.9E-02	0.6	6.1E-02
Barium	3.1E-03	1.9E-03	3.0E-03	1.8E-03	NS	NS	NS	NS	NS	NS	NS	NS
Chromium	2.0E-02	5.1E-03	2.0E-02	5.0E-03	NS	NS	NS	NS	NS	NS	NS	NS
Cobalt	0.2	0.1	0.2	0.1	NS	NS	NS	NS	NS	NS	NS	NS
Copper	1.4E-02	1.1E-02	1.4E-02	1.0E-02	NS	NS	NS	NS	NS	NS	NS	NS
Lead	3.6E-02	3.6E-03	3.0E-02	3.0E-03	NS	NS	NS	NS	NS	NS	NS	NS
Methylmercury	0.2	2.0E-02	0.2	1.7E-02	**32**	**3.2**	**11**	**1.1**	**87**	**8.7**	**39**	**3.9**
Mercury	**1.1**	0.1	0.5	0.1	0.3	3.3E-02	0.2	2.2E-02	0.1	1.3E-02	0.1	8.7E-03
Nickel	2.4E-03	1.2E-03	2.5E-03	1.2E-03	NS	NS	NS	NS	NS	NS	NS	NS
Selenium	0.2	0.1	0.2	0.1	0.5	0.3	0.4	0.3	0.8	0.5	0.7	0.4
Thallium	0.2	1.5E-02	0.2	2.0E-02	0.4	3.7E-02	0.4	3.7E-02	1.9E-02	1.9E-03	2.4E-02	2.4E-03
Vanadium	0.8	0.1	0.7	0.1	0.4	3.8E-02	0.3	2.7E-02	NS	NS	NS	NS
Zinc	1.5E-03	7.3E-04	1.4E-03	7.2E-04	NS	NS	NS	NS	NS	NS	NS	NS
Semivolatile Organic Compounds												
Hexachlorobenzene	**55**	**5.5**	**20**	**2.0**	**6.9**	0.7	**4.7**	0.5	NS	NS	NS	NS
Polycyclic aromatic hydrocarbons	**1.8**	0.2	0.4	4.3E-02	**1.1**	0.1	0.8	0.1	NS	NS	NS	NS
Polychlorinated Biphenyls												
Chlordanes (sum)	NS	NS	NS	NS	7.2E-03	1.4E-03	1.4E-02	2.8E-03	NS	NS	NS	NS
Dieldrin	NS	NS	NS	NS	0.2	0.1	0.2	0.1	NS	NS	NS	NS
Polychlorinated biphenyls (PCBs)	0.1	2.5E-02	0.1	2.4E-02	0.5	0.5	0.5	0.4	**1.6**	**1.4**	**1.8**	**1.5**
Dioxins/Furans												
PCDD/PCDFs (TEQ) mammalian	0.6	0.1	0.3	3.4E-02	0.7	0.1	0.5	0.1	0.9	0.1	0.6	0.1

Notes: NA = Not Available; NS = Not selected as a COC for this receptor.

Hazard quotients equal to or greater than one are outlined and bolded.

Table ES-7. Hazard Quotients for Modeled Short-Tailed Shrew Exposure

COC	SYW-10 95% UCL HQ NOAEL	SYW-10 95% UCL HQ LOAEL	SYW-10 Mean HQ NOAEL	SYW-10 Mean HQ LOAEL	SYW-18 95% UCL HQ NOAEL	SYW-18 95% UCL HQ LOAEL	SYW-18 Mean HQ NOAEL	SYW-18 Mean HQ LOAEL	NMC Island 95% UCL HQ NOAEL	NMC Island 95% UCL HQ LOAEL	NMC Island Mean HQ NOAEL	NMC Island Mean HQ LOAEL	Other Areas 95% UCL HQ NOAEL	Other Areas 95% UCL HQ LOAEL	Other Areas Mean HQ NOAEL	Other Areas Mean HQ LOAEL
Total Metals																
Arsenic	**5.3**	0.5	**2.3**	0.2	**2.1**	0.2	**2.0**	0.2	**2.0**	0.2	**2.0**	0.2	**2.6**	0.3	**2.1**	0.2
Barium	0.1	0.1	0.1	4.9E-02	0.1	3.4E-02	0.1	3.0E-02	0.1	4.2E-02	0.1	3.9E-02	0.1	3.2E-02	4.8E-02	2.9E-02
Cadmium	**1.2**	0.1	0.7	0.1	0.5	0.1	0.3	3.2E-02	2.0E-04	2.0E-05	1.8E-04	1.8E-05	0.4	4.2E-02	0.4	3.6E-02
Chromium	0.3	0.1	0.2	4.3E-02	0.1	3.4E-02	0.1	3.2E-02	0.2	4.7E-02	0.2	4.3E-02	0.2	4.1E-02	0.1	3.5E-02
Lead	**1.0**	0.1	0.6	0.1	0.4	4.4E-02	0.4	3.8E-02	0.4	4.3E-02	0.4	3.7E-02	**1.3**	0.1	0.7	0.1
Methylmercury	**30**	**3.0**	**25**	**2.5**	**24**	**2.4**	**19**	**1.9**	**15**	**1.5**	**13**	**1.3**	**18**	**1.8**	**15**	**1.5**
Mercury	0.5	5.2E-02	0.4	4.0E-02	0.4	4.0E-02	0.3	3.1E-02	0.2	2.0E-02	0.2	1.7E-02	0.2	2.4E-02	0.2	2.0E-02
Selenium	**1.3**	0.8	0.7	0.4	0.7	0.4	0.6	0.4	**1.1**	0.7	1.0	0.6	1.0	0.6	0.8	0.5
Thallium	**4.3**	0.4	**2.8**	0.3	1.0	0.1	0.9	0.1	**1.5**	0.1	0.8	0.1	**1.1**	0.1	0.9	0.1
Vanadium	**3.9**	0.4	**2.0**	0.2	**2.1**	0.2	**2.0**	0.2	**2.3**	0.2	**2.1**	0.2	**2.7**	0.3	**2.3**	0.2
Semivolatile Organic Compounds																
Hexachlorobenzene	**25**	**2.5**	**17**	**1.7**	**84**	**8.4**	**34**	**3.4**	**272**	**27**	**32**	**3.2**	**336**	**34**	**71**	**7.1**
Polycyclic aromatic hydrocarbons	**155**	**16**	**27**	**2.7**	**66**	**6.6**	**48**	**4.8**	**28**	**2.8**	**20**	**2.0**	**354**	**35**	**98**	**10**
Pesticides/Polychlorinated Biphenyls																
Chlordane isomers	8.0E-05	1.6E-05	6.8E-05	1.4E-05	1.7E-02	3.5E-03	1.5E-02	3.0E-03	2.2E-02	4.4E-03	1.5E-02	3.0E-03	1.7E-02	3.4E-03	1.5E-02	2.9E-03
Dieldrin	ND	ND	ND	ND	0.6	0.3	0.5	0.3	ND	ND	ND	ND	0.1	0.1	0.5	0.2
Endrin	ND	ND	ND	ND	0.1	8.5E-03	0.1	7.5E-03	ND	ND	ND	ND	0.2	2.4E-02	0.1	1.4E-02
Polychlorinated biphenyls (PCBs)	0.1	3.5E-02	5.9E-02	1.5E-02	0.1	1.9E-02	0.1	1.4E-02	0.1	1.4E-02	3.0E-02	7.4E-03	5.4E-02	1.3E-02	3.8E-02	9.4E-03
Dioxins/Furans																
PCDD/PCDFs (TEQ) mammalian	**18**	**1.8**	**8.6**	0.9	**6.4**	0.6	**4.2**	0.4	**2.4**	0.2	**1.2**	0.1	**5.8**	0.6	**3.2**	0.3

Notes:

Hazard quotients equal to or greater than one are outlined and bolded.

ND = Not detected