Marine Study - Hopedale Harbour, Hopedale, Labrador

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EXECUTIVE SUMMARY

Aivek-Stantec Partnership Limited (Stantec) was retained by the Newfoundland and Labrador Department of Environment and Conservation (NLDEC) to conduct a Marine Study at Hopedale Harbour in Hopedale, Labrador (see Drawing No. 121411777.210-EE-01 in Appendix A). The marine study was carried out as part of the Implementation of Remedial Action Plan – Years 1-3 and Marine Study at the Former United States Military Base and Subdivision Area in Hopedale, NL. The marine study was carried out in response to a Phase II/III Environmental Site Assessment (ESA), Human Health and Ecological Risk Assessment (HHERA) and Remedial Action Plan / Risk Management Plan (RAP/RMP) conducted at the Former U.S. Military Site and Residential Subdivision by Stantec in 2010 (refer to Stantec Report No. 121410103, dated May 17, 2010) and a subsequent marine sampling program conducted by Stantec in 2011 (refer to Stantec Letter Report No. 121411170, dated February 28, 2011) which indicated that elevated concentrations of PCBs were present in marine sediment and biota in Hopedale Harbour.

Results of the Marine Study are summarized below:

Flux Monitoring

- Flux monitoring including measurements of flow, total suspended solids, turbidity, and PCB concentrations was conducted on a bi-weekly basis from August 28, 2011 to November 16, 2011 as well as following two storm events which occurred on August 30, 2011 and September 16, 2011. The results of the three year flux study will be used to construct a sediment transport model to evaluate the potential for redistribution and burial of PCBs in harbour sediments.

Sediment Sampling

- Concentrations of PCBs in sixty surface sediment samples (11-SED1 to 11-SED44, 11-SED46 to 11-SED54, and 11-SED56 to 11-SED62) from Hopedale Harbour and the surrounding areas ranged from <0.01 mg/kg in several sediment samples to 0.56 mg/kg in 11-SED14.
- The concentrations of PCBs in sixteen sediment samples (11-SED2, 11-SED4 to 11-SED8, 11-SED11-11-SED15, 11-SED18, 11-SED19, 11-SED21, 11-SED22 and 11-SED26) exceeded the CCME PEL.
- Concentrations of PCBs exceeding the CCME PEL were generally detected in sediment samples collected from the inner portion of Hopedale Harbour (*i.e.*, the Inner Harbour) with the highest concentrations detected immediately north of the wharf (11-SED6 (0.51 mg/kg) and 11-SED14 (0.56 mg/kg)).
- Concentrations of PCBs were generally not detected in sediment samples from the Outer Harbour.

- PCBs were not detected in sediment samples from Tooktoosner Bay (11-SED58), Uvidluk Cove (11-SED59), or Black Head Tickle (11-SED60).
- PCB congener analysis of six sediment samples (11-SED3, 11-SED7, 11-SED14, 11-SED20, 11-SED-2, 11-SED39) indicated that the sum of the total congeners ranged from 4.38 ng/g (11-SED32) to 560 ng/g (11-SED14). The most abundant congeners were PCB153/168, PCB129/138/163, PCB147/149. PCB180/193, and PCB187.
- Concentrations of PCBs in five sediment core samples (C1-A to C5-A) from Hopedale Harbour ranged from <0.01 in several samples to 4.4 mg/kg in C4-A-09 collected at a depth of 9.5 cm to 10.7 cm.
- Two duplicate core samples (C2-B and C5-B) were submitted to LANSET at the University of Ottawa for radiometric lead-210 dating. The lead-210 dating will be used in association with other data collected from Hopedale Harbour over the three year study (*i.e*., flux results, PCB concentrations) to estimate when the greatest flux of PCB to the Harbour occurred. The results of the three year study will be used to construct a sediment transport model to evaluate the potential for redistribution and burial of PCBs in harbour sediments.

Marine Biota Sampling

- Samples of various finfish including shorthorn sculpin, rock cod, flatfish, Atlantic salmon, Arctic char, and Atlantic cod were collected from Hopedale Harbour (the Inner Harbour and the Outer Harbour), Black Head Tickle, Uvidluk Cove, Tooktoosner Bay and an unnamed reference site located 17 km southwest of Hopedale Harbour in August, 2011.

<u>Inner Harbour</u>

- Concentrations of PCBs in three sculpin liver samples from the Inner Harbour ranged from 3.3 mg/kg to 8.1 mg/kg.
- Concentrations of PCBs in three rock cod liver samples from the Inner Harbour ranged from 20 mg/kg to 34 mg/kg.
- Concentrations of PCBs were detected in eight of the ten sculpin fillet samples analysed from the Inner Harbour with concentrations ranging from 0.05 mg/kg to 0.99 mg/kg.
- Concentrations of PCBs were detected in nine of the ten rock cod fillet samples analysed from the Inner Harbour with concentrations ranging from 0.1 mg/kg to 0.72 mg/kg.
- The laboratory indicated that the PCBs resembled Aroclor 1260.

<u>Outer Harbour</u>

- Concentrations of PCBs in three sculpin liver samples collected from the Outer Harbour ranged from 0.25 mg/kg to 0.54 mg/kg.
- Concentrations of PCBs in three rock cod liver samples collected from the Outer Harbour ranged from 5.8 mg/kg to 21 mg/kg.

- Concentrations of PCBs were detected in three of the ten sculpin fillet samples from the Inner Harbour and ranged from 0.05 mg/kg to 0.23 mg/kg.
- Concentrations of PCBs were detected in nine of the ten rock cod fillet samples with concentrations ranging from 0.06 mg/kg to 1.1 mg/kg.
- The laboratory indicated that the PCBs resembled Aroclor 1260.

Black Head Tickle

- Concentrations of PCBs were detected in two of three sculpin liver samples analyzed from Black Head Tickle at concentrations of 0.1 mg/kg to 0.2 mg/kg.
- Concentrations of PCBs were detected in one of three rock cod liver samples analyzed from Black Head Tickle at a concentration of 0.1 mg/kg.
- Concentrations of PCBs were not detected in sculpin or rock cod fillets from Balckhead Tickle.
- The laboratory indicated that the PCBs, where detected, resembled Aroclor 1260.

Tooktoosner Bay

- Concentrations of PCBs were detected in two of the three sculpin liver samples at a concentration of 0.1 mg/kg.
- Concentrations of PCBs were detected in all three rock cod liver samples with concentrations ranging from 0.1 mg/kg to 0.2 mg/kg.
- Concentrations of PCBs were not detected in any of the rock cod fillet samples, sculpin fillet samples, Atlantic salmon fillet samples or the Atlantic salmon liver samples submitted for analysis.
- The laboratory indicated that the PCBs, where detected, resembled Aroclor 1260.

Shellfish

Southwest Bays

- Concentrations of PCBs were detected in six mussel samples from the Southwest Bays with concentrations ranging from 0.12 mg/kg to 0.25 mg/kg.
- Concentrations of PCBs were detected in four of the six clam samples analysed from the Southwest Bays with concentrations ranging from 0.05 mg/kg to 0.07 mg/kg.
- The laboratory indicated that the PCB, where detected, resembled Aroclor 1260.

Black Head Tickle

- Concentrations of PCBs were not detected in one mussel sample analysed from Black Head Tickle.

Tooktoosner Bay

- Concentrations of PCBs were not detected in one clam and one mussel sample analyzed from Tooktoosner Bay.

Underwater Video

Visibility was poor in the underwater video recordings due to high turbidity. The quality of the video for determining conditions in the sedimentary and water column environments was therefore considered to be low. Some debris was visible on the ocean floor in the video.

The statements made in this Executive Summary are subject to the same limitations included in the Closure (Section 5.0), and are to be read in conjunction with the remainder of this report.

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1.0 INTRODUCTION

Aivek-Stantec Partnership Limited (Stantec) was retained by the Newfoundland and Labrador Department of Environment and Conservation (NLDEC) to conduct a Marine Study at Hopedale Harbour in Hopedale, Labrador (see Drawing No. 121411777.210-EE-01 in Appendix A). The marine study was carried out as part of the Implementation of Remedial Action Plan – Years 1-3 and Marine Study at the Former United States Military Base and Subdivision Area in Hopedale, NL. The marine study was carried out in response to a Phase II/III Environmental Site Assessment (ESA), Human Health and Ecological Risk Assessment (HHERA) and Remedial Action Plan / Risk Management Plan (RAP/RMP) conducted at the Former U.S. Military Site and Residential Subdivision by Stantec in 2010 (refer to Stantec Report No. 121410103, dated May 17, 2010) and a subsequent marine sampling program conducted by Stantec in 2011 (refer to Stantec Letter Report No. 121411170, dated February 28, 2011) which indicated that elevated concentrations of PCBs were present in marine sediment and biota in Hopedale Harbour.

The following report describes the work pertaining to the marine study completed during Year 1 of the Implementation of Remedial Action Plan – Years 1-3 and Marine Study and was prepared specifically and solely for the above project. This report presents all of the factual findings and laboratory results of the work completed at the site from July to September 2011.

1.1 Site Description and Historical Land Use

The Inuit Community of Hopedale is located on the Labrador coast, 148 air miles to the north of Goose Bay, Newfoundland and Labrador (NL) (refer to Drawing No. 121411777.210-EE-01, Appendix A). Hopedale has no outside road access but a seasonal coastal boat service is available and the community has an airport. Between 1957 and 1969, a military and radar site was operated in Hopedale, Labrador by the United States government. The Hopedale site was a station on the United States Air Force Pinetree Line and was the most easterly site on the Mid-Canada Line of antennae stations which had extended across the country. The Hopedale site was also one of a series of sites which functioned as a Ballistic Missile Early Warning System (BMEWS) where enemy aircraft penetrating the northeastern approaches to the continent were identified and information was communicated to the United States. It has been reported that at its peak, the site housed 300 personnel.

The base was closed down in 1969 and the radome and radar antennae were removed. Portions of the remaining site were operated by Canadian Marconi as a telecommunications site until 1972 and by ITT as a telecommunications site until 1975. The complex was finally closed in 1975. Most of the remaining aboveground structures were demolished and buried in several locations around the site in the mid 1980s. At that time, limited clean-up efforts were carried out and included the removal and disposal of PCB containing transformers. With the exception of infrastructure at the Mid-Canada Line site, only the foundations and floor slabs of buildings and the foundations and bases of antennae currently remain on the Former U.S. Military Site. Two

antennae and an associated operations building are currently being operated by Bell Aliant at the Mid-Canada Line site.

During the operation of the former military base, access to the site was largely via sea. Therefore, the wharf located south of the Former US Military site, in Hopedale Harbour, was likely used to load, unload and dock boats at that time. Fuel was also transferred from boats to an aboveground pipeline located near the wharf. The wharf is currently in use and various structures including the community garage, a gas station, and the Newfoundland and Labrador Hydro Diesel Generating Plant are present near the wharf approach.

1.2 Background

Several environmental assessment reports have been produced (mainly since 1996) relating to potential and actual contamination at and in the vicinity of the Former U.S. Military Site and Residential Subdivision in Hopedale, Labrador. In 2009 and 2010, Stantec conducted a Phase II/III ESA and HHERA at the Former U.S. Military Site and Residential Subdivision on behalf of NLDEC. Stantec also supervised limited-remediation of PCB-impacted tar in three areas of the former military and radar site at that time.

The human health risk assessment (HHRA) assessed the potential risks to human receptors that may be present at the site. For the purpose of the HHRA, the site was divided into two areas based on receptor categories: the Residential Area (*i.e.*, residents) and the Former Radar Site (*i.e.*, recreational site users). The Residential Area and the Former Radar Site were assessed separately based on the expected human exposure time (*i.e.*, human receptors would be expected to spend less time on the Former Radar Site than in the Residential Area) and activities (*e.g.*, hunting is expected to be limited to the Former Radar Site).

The ecological risk assessment (ERA) assessed potential risks to aquatic and terrestrial receptors at the site. As part of the aquatic ERA, eight potential freshwater habitats (Subdivision Stream, Old Dump Pond, Small Pond Bog, Old Dam, Valley Drainage Ponds, Reservoir, Second Reservoir, and Big Lake) and one marine habitat (the Wharf Area, including the coastline and Hopedale Harbour) were identified. As part of the ERA, four terrestrial mammals (meadow vole, masked shrew, Arctic hare, and red fox), two terrestrial birds (American robin and short-eared owl) and two semi-aquatic birds (common merganser and herring gull) were assessed.

The results of the HHERA indicated the potential for adverse risks to human and/or ecological receptors from exposure to total petroleum hydrocarbons (TPH), PCBs and/or metals impacts at the Former Radar Site and the Residential Area. Precautionary actions, remedial activities and risk management strategies were therefore recommended for the control of hazards identified at the site. Priorities were assigned to different areas requiring remediation, with the highest priority assigned to PCB-impacted areas near residential areas and the PCB-impacted area located up-gradient of the community water supply source (the BMEWS site). It was recommended that SSTLs be used as remediation criteria at the site.

In 2010-2011, Stantec conducted additional soil and sediment delineation, soil vapour monitoring, and a preliminary marine sampling program at the site to address data gaps and/or actions recommended in the 2010 Phase II/III ESA and HHERA report, and recommendations provided through consultation with the Nunatsiavut Government (NG). Volume estimates were also refined for areas requiring soil remediation. Forty-six sediment samples and thirty-two fish samples were collected throughout Hopedale Harbour. Elevated concentrations of PCBs were detected in the marine sediment and fish samples as well as from selected sediment samples collected from freshwater ponds and streams at the site.

The Government of Newfoundland and Labrador has committed funds over the next three years to support ongoing remediation efforts in Hopedale. A Stakeholder Scientific Advisory Working Group (referred to as the "Stakeholder Committee") consisting of representatives from the Inuit Community Government of Hopedale, NG, NLDEC, Labrador Grenfell Health, Intergovernmental and Aboriginal Affairs Secretariat, and technical advisors was recently established to advise on go-forward work plans at the site. The data collected to date was discussed by a Stakeholder Committee in May, 2011, and a mutually-agreeable plan for the 2011-2012 site remediation and investigative work was determined.

The key objectives of the three year plan include implementing the remedial action plan for the Former US Military Site, the Residential Subdivision, and the Old School Site and carrying out a detailed marine study for Hopedale Harbour.

1.3 Scope of Work – Marine Study, Hopedale Harbour

Hopedale Harbour is a marine aquatic environment and the shoreline is lined with frequent bedrock outcrops and large boulders. Hopedale Harbour can conceptually be split into three broad areas, both in terms of marine habitat and the sedimentary environment, including the following:

- The Inner Harbour, including nearshore environments and an inner basin having depths of 10 to 20 m;
- The Outer Harbour, extending out to Ellen Island (Anniowaktorusek), and including Umeakovik Anchorage, having depths to 50 m or greater; and,
- The Southwest Bays, shallow areas located in the southwest corner of the harbour, around Kretschmer island, and in the vicinity of the airstrip, having depths less than 10 m.

Historically, an unknown quantity of PCBs (presently estimated to be on the order of 100 kg) has entered Hopedale Harbour, either by direct deposit, or via the small stream that enters the harbour near the wharf. Conceptually, PCBs would have entered the harbour and sorbed to particulate matter (either fine particulate organic matter or silt- and clay-sized particles).

Based on previous investigations, elevated concentrations of PCBs were detected in sediment and muscle tissue from rock cod and to a lesser extent, shorthorn sculpin from Hopedale Harbour.

A key goal of the Year 1 study was to gain sufficient understanding of the present distribution of PCBs in marine sediments and country foods to support a human health risk assessment for residents of Hopedale who might consume such foods (*i.e.*, the Marine Human Health Risk Assessment). Specifically, Stantec focussed on the following key objectives for Year 1 of the Marine Study:

1 Measure PCB flux from the Main Watershed, via Old Dump Pond and the Small Bog Pond, to Hopedale Harbour.

2 Complete delineation of PCB contamination in marine sediments in and around Hopedale Harbour.

3 Collect additional samples of marine life used as country foods by Hopedale residents from 3 distinct zones.

4 Ship all un-analyzed sediment and marine life samples to the Royal Military College (RMC) in Kingston, Ontario for storage and potential future use by this or other projects.

5 Collect underwater videography from Hopedale Harbour.

6 Prepare a detailed work plan prior to the commencement of field work.

7 Prepare a Marine Study report that contains all the factual data collected in Year 1 (2011-2012) and a Plain Language Summary.

8 Conduct a Marine Human Health Risk Assessment incorporating historical site data and other data made available by NLDEC, NG and RMC. The Marine Human Health Risk Assessment report will include a Plain Language Summary.

9 Develop a Microsoft Access database containing all the data collected in 2010-2011 and Year 1 (2011-2012).

10 Act as technical advisors on the stakeholder committee and attend three (3) meetings in St. John's, NL.

The marine study focused on the three key zones identified above (*i.e.*, the Inner Harbor, the Outer Harbor, the Southwest Bays) as well as four background areas (Black Head Tickle, Tooktoosner Bay, Uvidluk Cove and an unnamed reference area located 17 km southwest of Hopedale Harbour). These zones also correspond to areas typically utilized by community residents as fishing or hunting areas for country foods, and the biological tissues collected from each area will reflect the resources potentially present.

1.4 Regulatory Framework

For this study, the following guidelines are considered to be the appropriate screening guidelines for sediment in Hopedale Harbour:

- The Canadian Council of the Ministers of the Environment (CCME) Probable Effects Levels (PELs) for marine sediment for PCBs.

2.0 METHODOLOGY

2.1 Field Procedures

The field component for the marine study consisted of flux monitoring, the collection of marine grab sediment samples, the collection of marine core sediment samples, the collection of marine biota including finfish and shellfish and underwater videography. Field work was conducted by Stantec's field personnel in association with local hires.

Field work for the marine study was performed in conjunction with remedial work completed on behalf of the NLDEC at the Former U.S. Military Site, the Residential Subdivision and the Old School Site in Hopedale, NL (Stantec Report Nos. 121411777.200 and 121411820). Field work was conducted in three stages, as follows: August 18 to August 30, 2011 (Stage 1), September 27 to October 4, 2011 (Stage 2) and October 22 to November 7, 2011 (Stage 3). The majority of the field work completed for the marine study was completed during Stage 1. All field work was conducted in compliance with the site-specific Health Safety and Contingency Plan (HSCP) prepared for Years 1 to 3 of the Implementation of the RAP and the Marine Study.

2.1.1 Flux Study

Sampling locations for flux monitoring were established in the field by Stantec personnel, and are shown on Drawing No. 121411777.200-EE-02 in Appendix A. Sampling location ODP is located downstream of the outlet from Old Dump Pond, and was selected to determine whether Old Dump Pond is a predominant source of the PCB flux. Sampling location HARBOUR is located near the road where the stream enters the harbour and was selected to allow quantification of the flux to the harbour. The two sampling locations consisted of straight reaches where the streambed was relatively uniform, and where the flow was relatively uniform and free of eddies, dead water and excessive turbulence.

Biweekly flux monitoring was conducted during the fall/ice-free season (between late-August and mid-November 2011) as well as during two significant storm events which occurred on August 30 and September 16, 2011. During each monitoring event, surface water samples were collected at the two sampling locations for total suspended solids (TSS), turbidity and total PCBs. Stream flow was also recorded. Stantec representatives conducted flux monitoring while on-site during the Stage 1, 2 and 3 field visits and a local hire conducted flux monitoring during the remaining monitoring events. Stantec representatives provided training (*i.e.*, sampling procedures for the collection of stream flux data and how to properly package and ship samples) to the local hire in August, 2011.

Surface water samples were collected at each sampling location prior to taking flow measurements. During sample collection, care was taken not to stir up sediment in the stream. Samples were collected into clean, new sample bottles that were packed on ice in sample coolers and shipped to Maxxam Analytics Inc. in St. John's, NL and Bedford, Nova Scotia (NS) for analysis of TSS, turbidity and total PCBs.

At the ODP sampling location, stream flow was determined by recording the wetted width of the stream, recording the stream velocity in the centre of the channel just below mid-depth (*i.e.*, at 0.6 times the total depth) with an electronic flow meter device (Global Flow Probe, Model FP211) and recording water depth at three locations (at ¼, ½ and ¾ wetted width). The stream flow at the ODP sampling location was calculated using the following equation:

$$Q_{stream} = VA$$

Where: Q_{stream} = Stream discharge (m^3/s)
V = Velocity (m/s)
A = Cross sectional area (m^2) ≃ Average depth in m x wetted width in m

At the HARBOUR sampling location, stream flow was determined by recording the depth of water in three culverts that discharge into Hopedale Harbour and recording the water velocity in the centre of each culvert just below mid-depth (*i.e.*, at 0.6 times the total depth) with the electronic flow meter device (Global Flow Probe, Model FP211). As a back-up, the wetted width of the stream and water depth at three locations (at ¼, ½ and ¾ wetted width) were also measured approximately 10 m upstream of the culverts. The stream flow at the ODP sampling location was calculated using the following equation:

$$Q_{stream} = V_{culvert1}A_{culvert1} + V_{culvert2}A_{culvert2} + V_{culvert3}A_{culvert3}$$

Where: Q_{stream} = Stream discharge (m^3/s)
$V_{culvert}$ = Velocity (m/s)
$A_{culvert}$ = Flow area for a partially filled culvert (m^2) = $d^2/8*(\theta - \sin\theta)$ for a culvert
that is < half full
θ = Internal angle (radians) = $2\cos^{-1}(1-2y/d)$
d = Culvert diameter = 1 m for culvert1, culvert2 and culvert3
y = Flow depth (m)

2.1.2 Marine Sediment Sampling

2.1.2.1 Surface Sediment Samples

Marine surface sediment sampling was conducted between August 18 and August 25, and September 27 and 28, 2011. Sixty composite surface sediment samples (11-SED1 to 11-SED44, 11-SED46 to 11-SED54 and 11-SED56 to 11-SED62) were collected from Hopedale Harbour and surrounding areas using a Ponar sampler or a Van Veen sampler. The sediment samples were collected off the side of a boat owned and operated by Mr. Bruce Gear. At each sampling location, two duplicate composite samples were created using subsamples from three replicate grab samples. Blind duplicate samples were also collected at six of the sampling locations (11-SED-DUP1 to 11-SED-DUP6). Grab sediment samples were generally collected

in a grid pattern, as shown on Drawing Nos. 121411777.200-EE-02 and 121411777.200-EE-03 in Appendix A.

The sediment samples were examined in the field for any evidence of impacts. The samples were placed in clean glass jars and were placed on ice in sample coolers that were shipped to Maxxam Analytics Inc. in St. John's, NL and Bedford, NS for total PCB, total organic carbon (TOC) and/or PCB congener analysis. Duplicate samples were shipped to Stantec's office in St. John's, NL where they were archived.

2.1.2.2 Core Sampling

Undisturbed sediment core samples were collected from five locations (C1 to C5) within the inner portion of Hopedale Harbour on October 26, 2011. At each sampling location, two duplicate cores were collected by divers, brought to the surface, and were promptly sectioned into 1-cm thick slices on the support boat. Diving services were provided by Central Diving Limited. Core sediment sample locations are shown on Drawing No. 121411777.200-EE-02 in Appendix A.

At each sediment core sample location, clear extruded acrylic core tubes (45 cm long by 2 inches inside diameter), sharpened on one end, were taken to the ocean bottom by divers at the designated location (designated based on GPS coordinates, and temporarily marked by the boat anchor). The divers descended along the anchor line, selected a location near the anchor that appeared visibly undisturbed, and pushed the core tube down as far as possible into the sediment (depths ranged from 14 to 29 cm). Two replicate core samples were collected at each sampling location and were no more than 30 cm apart with the intention that the two cores would be replicates. Once embedded, the top of the core tube was sealed with rubber stoppers (size 10 or 10.5). The core tube was then removed from the sediments, and when clear, a second rubber stopper inserted into the bottom of the core. The diver then ascended to the surface while maintaining a firm grip on the bottom of the core tubes and the bottom rubber stoppers, and transferred the core tubes to the support team on the boat. The core tubes were always kept upright to minimize movements that could disturb the core samples.

On the boat, the support team sectioned the core samples into 1-cm slices. To do this, the bottom stopper was gently removed, and the extruding stopper (the stopper on the end of a length of threaded steel rod) was inserted into the bottom of the core tube in its place. A wooden stop block was aligned inside the bottom of the core tube, and the extruding stopper was pushed upwards, driving the sediment core up through the core tube, until the wooden stop block was seated in the bottom of the core tube, and the rubber extruding stopper was pushing the column of sediment that was the core sample upwards through the core tube. The top stopper "popped out" as the sediment core was driven upwards, and excess water was allowed to drain away from the top of the core until the sediment-water interface reached the top of the core tube.

At this point, two pairs of vise-grips were snapped onto the threaded rod, below and snugly in contact with the bottom of the wooden stop block. The handles of the vise-grips pointed out in different directions to facilitate their handling and operation, and to ensure that the jaws of the

vise-grips were fully in contact with each other, and the bottom of the wooden stop block. The vise-grips prevented further extrusion of the sediment core, and the sediment at that point was flush with the top of the acrylic core tube.

A short length of extruding tube (approximately 10 cm in length) was then aligned with the top of the core tube, and held in place. The top pair of vise-grips was unclipped, removed and re-clipped below the lower pair of vise-grips. The core tube was pushed down 1 cm until the wooden stop block contacted the vise-grips (note that the jaws of the vise-grips were nominally 1 cm thick). When the slide was complete, an approximately 1-cm slice of sediment was extruded upwards inside the short length of extruding tube. The tip of a steel spatula was inserted between the top of the core tube and the short extruding tube. The spatula was pushed through the gap between the two tubes slicing off the top 1-cm slice of sediment. Both the top of the core tube and the bottom of the extruding tube were slightly beveled in order to facilitate this operation. When the cut was complete, the spatula was slid off the top of the core tube, taking the extruding tube with the spatula. Holding the extruding tube over an open, labeled sample jar, the spatula was withdrawn so that the sediment sample was gently deposited into the sample jar. The spatula and extruding tube were then rinsed in clean seawater, and the operation was repeated for up to 29 sediment slices. Each sample jar was labeled with the core sampling location (*e.g.*, C1), the core sample replicate (A or B) and the slice number, counting sequentially from the top of the core (01, 02, 03, etc.).

Sediment samples were subsequently frozen, then packed on ice in sample coolers, and shipped to Stantec's office in St. John's, NL for sample selection and laboratory submission. All sediment samples from the A-cores (C1-A to C5-A) were submitted to Maxxam Analytics in Bedford, NS for total PCB analysis. Sediment samples from two of the B-cores (C2-B and C5-B) were submitted to the Laboratory for the Analysis of Natural and Synthetic Environmental Toxins (LANSET) at the University of Ottawa in Ottawa, Ontario for sediment core dating (unsupported lead-210 and/or caesium-137).

2.1.3 Fish Sampling

Marine finfish were collected from Hopedale Harbour and reference locations between August 20 and 27, 2011. Fishing locations were selected based on guidance from local residents as well as information provided by the Royal Military College (RMC) based on the preliminary results of the Food Basket Survey. Fishing locations included the inner portion of Hopedale Harbour (IH), the outer portion of Hopedale Harbour (OH), Black Head Tickle (BHT) located approximately 2.5 km north of Hopedale Harbour, Tooktooosner Bay (TB) located adjacent to the local airstrip and approximately 1.5 km south of Hopedale Harbour, Uvidluk Cove (UC) located approximately 2.5 km south of Hopedale Harbour, and an unnamed reference location (R) located approximately 17 km southeast of Hopedale (for salmon and char). Sampling locations are shown on Drawing No. 121411777.210-EE-02 and 121411777.210-EE-03 in Appendix A. A permit for the collection of the fish samples was obtained from Fisheries and Oceans Canada prior to proceeding with this sampling and is presented in Appendix B. A permit to access Labrador Inuit Lands was obtained from the Nunatsiavut Government prior to proceeding with this sampling and is also presented in Appendix B.

Rock cod, sculpin and flatfish were collected via hook and line or rod and reel over the side of a boat owned and operated by Mr. Bruce Gear, a local fisherman of Hopedale, NL. Fishing for rock cod, sculpin and flatfish was conducted for two to three days at each location. Attempts to collect herring and capelin were unsuccessful due to the season.

Salmon and Arctic char were collected with nylon webbing gillnets placed along the shorelines. Gillnets left for four to twelve hours at each location and were checked periodically.

Fish were dissected in the field and fillet and liver composite samples were formed. For smaller fish, fillets from multiple (up to three) fish collected from the same sampling locations were composited to make up the minimum mass (50 g) required by the laboratory for analysis.

Samples were weighed on-site with a top-loading scale. Biota samples were frozen and shipped to Stantec's office in St. John's, NL for sample selection and submission to Maxxam Analytics Inc. in St. John's, NL and Bedford, NS for PCB and lipid (crude fat) analysis.

A summary of fish samples collected is provided in Table 2.1.

Table 2.1 Summary of Fish Collected

Sample Location	Species Collected	Fillet Samples	Liver Samples	Laboratory Analysis Conducted	
				Crude Fat	Total PCBs
Inner Harbour	Sculpin	11-SCULPIN-IH1 to 11-SCULPIN-IH10	11-SCULPIN LIVER-IH1 to 11-SCULPIN LIVER-IH3	Tissue (10) Liver (3)	Tissue (10) Liver (3)
	Rock Cod	11-ROCKCOD-IH1 to 11-ROCKCOD-IH13	11-ROCKCOD LIVER-IH1 to 11-ROCKCOD LIVER-IH3	Tissue (10) Liver (3)	Tissue (10) Liver (3)
	Flat fish	11-FLAT FISH-IH1	11-FLAT FISH LIVER-IH1	-	-
Outer Harbour	Sculpin	11-SCULPIN-OH1 to 11-SCULPIN-OH10	11-SCULPIN LIVER-OH1 to 11-SCULPIN LIVER-OH3	Tissue (10) Liver (3)	Tissue (10) Liver (3)
	Rock Cod	11-ROCKCOD-IH1 to 11-ROCKCOD-IH10	11-ROCKCOD LIVER-OH1 to 11-ROCKCOD LIVER-OH3	Tissue (10) Liver (3)	Tissue (10) Liver (3)
Black Head Tickle	Sculpin	11-SCULPIN-BHT1 to 11-SCULPIN-BHT10	11-ROCKCOD LIVER-IH1 to 11-ROCKCOD LIVER-IH3	Tissue (10) Liver (3)	Tissue (10) Liver (3)
	Rock Cod	11-ROCK COD-IH1 to 11-ROCK COD-IH10	11-ROCKCOD LIVER-BHT1 to 11-ROCKCOD LIVER-BHT3	Tissue (10) Liver (3)	Tissue (10) Liver (3)
	Flat fish	11-FLAT FISH-BHT1 to 11-FLAT FISH-BHT6	11-FLAT FISH LIVER-BHT1	-	-
	Arctic Char	11-CHAR-BHT1 and 11- CHAR-BHT2	11-CHAR LIVER-BHT1 and 11- CHAR LIVER-BHT2	-	-
	Atlantic Cod	11-ATLANTIC COD-BHT1 to 11-ATLANTIC COD-BHT4	11-ATLANTIC COD LIVER-BHT1 to 11-ATLANTIC COD LIVER-BHT3	-	-
	Salmon	11-SALMON-BHT1 to 11-SALMON-BHT5	11-SALMON LIVER-BHT1 to 11-SALMON LIVER-BHT5	-	-

Sample Location	Species Collected	Fillet Samples	Liver Samples	Laboratory Analysis Conducted	
				Crude Fat	Total PCBs
Tooktoosner Bay	Sculpin	11-SCULPIN-TB1 to 11-SCULPIN-TB10	11-SCULPIN LIVER-TB1 to 11-SCULPIN LIVER-TB3	Tissue (10) Liver (3)	Tissue (10) Liver (3)
	Rock Cod	11-ROCKCOD-TB1 to 11-ROCKCOD-TB10	11-ROCKCOD LIVER-TB1 to 11-ROCKCOD LIVER-TB3	Tissue (10) Liver (3)	Tissue (10) Liver (3)
	Arctic Char	11-CHAR-TB1	11-CHAR LIVER-TB1	-	-
	Salmon	11-SALMON-TB1 to 11-SALMON-TB6	11-SALMON LIVER-TB1 to 11-SALMON LIVER-TB6	Tissue (3) Liver (3)	Tissue (3) Liver (3)
Uvidluk Cove	Sculpin	11-SCULPIN-UC1 to 11-SCULPIN-UC10	11-SCULPIN LIVER-UC1 to 11-SCULPIN LIVER-UC3	-	-
	Rock Cod	11-ROCKCOD-UC1 to 11-ROCKCOD-UC10	11-ROCKCOD LIVER-UC1 to 11-ROCKCOD LIVER-UC3	-	-
	Flat fish	11-FLAT FISH-UC1	11-FLAT FISH LIVER-UC1	-	-
Unnamed Reference Area	Arctic Char	11-CHAR-R1 to 11- CHAR-R6	11-CHAR LIVER-R1 and 11- CHAR LIVER-R2	-	-

2.2 Shellfish Sampling

Shellfish were collected from two areas identified within the Southwest Bays, and from two reference areas, including Black Head Tickle and Tooktoosner Bay between August 20 and 26, 2011. These areas were selected based on guidance from local residents. Sampling locations are shown on Drawing No. 121411777.210-EE-02 and 121411777.210-EE-03 in Appendix A. A permit for the collection of the shellfish samples was obtained from Fisheries and Oceans Canada prior to proceeding with this sampling and is presented in Appendix B. A permit to access Labrador Inuit Lands was obtained from the Nunatsiavut Government prior to proceeding with this sampling and is also presented in Appendix B.

Shellfish including mussels and clams were manually collected from each of the target areas (if present) during low tide. Periwinkles were observed in the Southwest Bays, however, they were less than 5 mm in size and were thus not expected to be consumed by local residents. As a result, periwinkles were not collected as part of the current program.

Mussels and clams were “cleaned”, cooked and shucked in accordance with local custom prior to packing for analysis of PCBs. To achieve this, shellfish were held overnight in a pail of seawater collected at or near the shellfish collection location in order to clear out grit after collection. The shellfish were then steamed (to release the soft tissue from the shell) and shucked. The soft tissues from each sample location were weighed with a scale and composited to form 50 g samples. The samples were then frozen and shipped to Stantec’s office in St. John’s, NL for sample selection and submission to Maxxam Analytics Inc. in St. John’s, NL and Bedford, NS for PCB and lipid (crude fat) analysis. Unsubmitted samples were temporarily archived in freezers at Stantec’s office, pending 2012 sampling.

A summary of shellfish samples collected is provided in Table 2.2.

Table 2.2 Summary of Shellfish Collected

Sample Location	Species Collected	Composite Samples	Laboratory Analysis Conducted	
			Crude Fat	Total PCBs
Southwest Bays Area 1	Mussels	11-MUSSELS-SBA(I)1 to 11-MUSSELS-SBA(I)3	3	3
	Clams	11-CLAMS-SBA(I)1 to 11-CLAMS-SBA(I)3	3	3
Southwest Bays Area 2	Mussels	11-MUSSELS-SBA(II)1 to 11-MUSSELS-SBA(II)3	3	3
	Clams	11-CLAMS-SBA(II)1 to 11-CLAMS-SBA(II)3	3	3
Black Head Tickle	Mussels	11-MUSSELS-BHT1	1	1
	Clams	None present	-	-
Tooktoosner Bay	Mussels	11-MUSSELS-TB1	1	1
	Clams	11-CLAMS-TB1	1	1

2.2.1 Marine Mammal Sampling

As per the scope of work, marine mammals including harbour seal, dolphin and porpoise were to be sampled on an opportunistic basis, from animals harvested for food purposes by local hunters. Stantec collaborated with the *AngajukKâk* (*i.e*., mayor) of the Community of Hopedale and local residents (Mr. Bruce Gear and Mr. Eddie Pottle) to engage local hunters to provide tissue samples from harvested animals. No marine mammal samples, however, were provided to Stantec during the 2011 field program.

2.2.2 Underwater Video

During sediment core sampling on October 26, 2011, divers recorded video of the harbour bottom to help understand conditions in the sedimentary and water column environments. The videography focused on providing qualitative information on sediment types, and characteristic biota present at different water depths and in different zones within Hopedale Harbour. GPS locations were marked as the video was shot to document locations and are shown on Drawing No. 121411777.210-EE-04 in Appendix A.

2.3 Laboratory Analysis

2.3.1 Laboratory Work

With the exception of core sediment dating, Maxxam Analytics Inc. conducted all laboratory analysis for the current project. Core sediment dating was conducted by the Laboratory for the Analysis of Natural and Synthetic Environmental Toxins (LANSET) at the University of Ottawa, Department of Biology. During this investigation a total of seventy-one (71) grab sediment samples, ninety-eight (98) core sediment samples, one hundred and ten (110) finfish samples, fifteen (15) shellfish samples and twenty-two (22) surface water (flux) samples were submitted to Maxxam Analytics for analysis of various chemical parameters. A total of forty-three (43)

core sediment samples were submitted to LANSET for dating. Methodologies utilized by the laboratories in analysis of the samples are noted on laboratory reports in Appendix D.

3.0 RESULTS

3.1 Flux Monitoring Study

Flux monitoring was conducted on a bi-weekly basis from August 28, 2011 to November 16, 2011. Three additional flux measurements were collected after storm events on August 30, 2011 and September 16, 2011. Surface water samples were collected at each location at the time of monitoring event.

Table C.1, Appendix C presents the calculated flow rates for each location during each monitoring event. Analytical results of TSS, turbidity, and PCBs are also presented in Table C.1, Appendix C.

The flow rates at the Old Dump Pond monitoring station (ODP) ranged from 0.01 m^3/s (August 28, September 12, and November 7) to 0.6 m^3/s (November 16). Total suspended solids in the water samples collected from Old Dump Pond ranged from <1 mg/L (November 16) to 10 mg/L (August 28) while the turbidity ranged from 0.6 NTU (October 24 and November 16) to 2.3 (September 27). Concentrations of PCBs were not detected in surface water samples collected from this location.

The flow rates at the Harbour monitoring station ranged from 0.01 m^3/s (November 7) to 0.16 m^3/s (August 30). The highest flow rate recorded at the Harbour monitoring station was after a storm event. Total suspended solids in the water samples collected from the Harbour monitoring station ranged from 2 mg/L (September 27, October 10, October 24, and November 7) to 26 mg/L (November 16) while the turbidity ranged from 1.0 NTU (October 24) to 19 NTU (November 16). PCBs were detected in one surface water sample from this monitoring location on August 30 (6 am) at a concentration of 0.06 µg/L. The laboratory indicated that the PCBs in surface water at this monitoring station resembled Aroclor 1260.

Additional flux monitoring with associated analyses will be conducted during Years 2 and 3 of the Marine Study. The results of the three year study will be used to construct a sediment transport model to evaluate the potential for redistribution and burial of PCBs in harbour sediments.

3.2 Marine Sediment Sampling Results

3.2.1 Surface Sediment Samples

Sixty surface sediment samples (11-SED1 to 11-SED44, 11-SED46 to 11-SED54, and 11-SED56 to 11-SED62) as well as six field duplicate samples (11-SED-DUP1 to 11-SED-DUP6) were collected from Hopedale Harbour and the surrounding area from August 18 to August 25

and on September 27 and 28, 2011. Proposed samples 11-SED45 and 11-SED55 were not collected because the ocean bottom was too rocky in these areas to obtain a sample. Sediment samples 11-SED1 to 11-SED44, 11-SED46-11-SED54, 11-SED56, 11-SED61, and 11-SED62 were collected from within Hopedale Harbour. Sediment sample 11–SED58 was collected from Tooktoosner Bay. Sediment sample 11-SED59 was collected from Uvidluk Bay. Sediment sample 11-SED60 was collected from Black Head Tickle. The locations of these samples as well as general site features are provided on Drawing Nos. 121411777.210-EE-02 and 121411777.301-EE-03 in Appendix A.

Analysis for PCBs and total organic carbon was conducted on all sixty sediment samples collected from the area as well as the six field duplicate samples (11-SED DUP 1 to 11-SED DUP6). Maxxam Analytics Inc. also analysed three laboratory duplicate sediment samples (11-SED6 Lab-Dup, 11-SED52 Lab-Dup and 11-SED59 Lab-Dup) for PCBs and two laboratory duplicate samples for TOC (11-SED-DUP4 Lab-Dup and 11-SED28 Lab-Dup). Results of laboratory analysis of surface sediment samples obtained from Hopedale Harbour during this investigation as well as previous investigations by Stantec in 2009 and 2010 are presented in Table C-2 in Appendix C. Corresponding analytical reports from Maxxam Analytics Inc. are presented in Appendix D.

Concentrations of PCBs in the marine surface sediment samples collected during this sampling program ranged from <0.01 mg/kg in several sediment samples to 0.56 mg/kg in 11-SED14. The concentrations of PCBs in sixteen sediment samples (11-SED2, 11-SED4 to 11-SED8, 11-SED11 to 11-SED15, 11-SED18, 11-SED19, 11-SED21, 11-SED22 and 11-SED26) exceeded the CCME PEL.

Concentrations of PCBs exceeding the CCME PEL were generally detected in sediment samples collected from the inner portion of Hopedale Harbour (*i.e.*, the Inner Harbour) with the highest concentrations detected immediately north of the wharf (11-SED6 (0.51 mg/kg) and 11-SED14 (0.56 mg/kg)). Generally, concentrations of PCBs were not detected in sediment samples from the outer harbour. In addition, PCBs were not detected in sediment samples from Tooktoosner Bay (11-SED-58), Uvidluk Cove (11-SED-59), or Black Head Tickle (11-SED-60).

Six sediment samples (11-SED-3, 11-SED-7, 11-SED-14, 11-SED-20, 11-SED-32, and 11-SED-39) were submitted to Maxxam Analytics for PCB congeners analysis. All 209 congeners were analysed for. Analytical results are presented in Table C.3, Appendix C. Analytical results indicated the sum of the total congeners ranged from 4.38 ng/g (11-SED32) to 560 ng/g (11-SED-14). The most abundant congeners were PCB153/168, PCB129/138/163, PCB147/149. PCB180/193, and PCB187.

3.2.2 Core Sediment Samples

Five sediment core samples (C1-A to C5-A) and the respective duplicates (C1-B to C5-B) were collected from the Inner Harbour on October 26, 2011. Core sediment sample locations are shown on Drawing No. 121411777.210-EE-02, Appendix A.

Sediment core samples C1-A to C5-A were analysed for PCBs and TOC. Concentrations of PCBs in the core sediment samples ranged from <0.01 in several samples to 4.4 mg/kg in C4-A-09, which was collected from a depth of 9.5 to 10.7 cm. The laboratory indicated that the PCBs resembled Aroclor 1260.

Two duplicate core samples (C2-B and C5-B) were submitted to LANSET at the University of Ottawa for radiometric lead-210 dating. Results of radiometric lead 210 dating are presented in Table C.4, Appendix C. The lead-210 dating will be used in association with other data collected from Hopedale Harbour over the three year study (*i.e.*, flux results, PCB concentrations) to estimate when the greatest flux of PCB to the Harbour occurred. The results of the three year study will be used to construct a sediment transport model to evaluate the potential for redistribution and burial of PCBs in harbour sediments.

3.3 Results of Marine Biota Sampling

3.3.1 Fin Fish

Samples of various finfish including shorthorn sculpin, rock cod, flatfish, Atlantic salmon, Arctic char, and Atlantic cod were collected from Hopedale Harbour (the Inner Harbour and the Outer Harbour), Black Head Tickle, Uvidluk Cove, Tooktoosner Bay and an unnamed reference site located 17 km southeast of Hopedale Harbour in August, 2011. A summary of finfish collected and finfish selected for analysis of PCBs is presented in Table 2.1. Sample locations are shown on Drawing No. 121411777.210-EE-02 and Drawing No. 121411777.210-EE-03 in Appendix A. Results of laboratory analysis of PCBs in finfish are presented in Table C.5, Appendix C. Corresponding analytical reports are presented in Appendix D.

3.3.1.1 Inner Harbour – Fin Fish

Analysis for PCBs and crude fat was conducted on fillets from ten sculpin (11-SCULPIN-IH1 to 11-SCULPIN-IH10), three sculpin livers (11- SCULPIN LIVER-IH1 to 11-SCULPIN LIVER-IH3), ten rock cod fillets (11-ROCKCOD-IH1 to 11-ROCKCOD-IH10), and three rock cod livers (11-ROCKCOD LIVER-IH1 to 11-ROCKCOD LIVER-IH3) collected from the Inner Harbour. Maxxam Analytics Inc. also analysed two laboratory duplicate samples (11-ROCKCOD-IH10 Lab-Dup and 11-ROCKCOD LIVER-IH3 Lab-Dup) for PCBs and one laboratory duplicate sample for crude fat (11-ROCKCOD-IH7 Lab-Dup).

Analytical results indicated that detectable concentrations of PCBs were detected in all three of the liver samples from the sculpin with concentrations ranging from 3.3 mg/kg to 8.1 mg/kg. Concentrations of PCBs were also detected in all three rock cod liver samples with concentrations ranging from 20 mg/kg to 34 mg/kg. Concentrations of PCBs were detected in eight of the ten sculpin fillets submitted for analysis and concentrations ranged from 0.05 mg/kg to 0.99 mg/kg. Concentrations of PCBs were detected in nine of the ten rock cod fillet samples with concentrations ranging from 0.1 mg/kg to 0.72 mg/kg. The laboratory indicated that the PCBs resembled Aroclor 1260.

3.3.1.2 Outer Harbour – Fin Fish

PCB and crude fat analysis was conducted on fillets from ten sculpin (11- SCULPIN-OH1 to 11- SCULPIN-OH10), three sculpin livers (11- SCULPIN LIVER-OH1 to 11-SCULPIN LIVER-OH3), ten rock cod fillets (11-ROCKCOD-OH1 to 11-ROCKCOD-OH10), and three rock cod livers (11-ROCKCOD LIVER-OH1 to 11-ROCKCOD LIVER-OH3) collected from the outer harbour. Maxxam Analytics Inc. also analysed a laboratory duplicate sample (11-ROCKCOD-OH1 Lab-Dup) for PCBs.

Analytical results indicated that concentrations of PCBs were detected in all three of the liver samples from the sculpin with concentrations ranging from 0.24 mg/kg to 0.54 mg/kg. Concentrations of PCBs were also detected in all three rock cod liver samples with concentrations ranging from 5.8 mg/kg to 21 mg/kg. Concentrations of PCBs were detected in three of the ten sculpin fillets submitted for analysis with concentrations ranging from 0.05 mg/kg to 0.23 mg/kg. Concentrations of PCBs were detected in nine of the ten rock cod fillet samples with concentrations ranging from 0.06 mg/kg to 1.1 mg/kg. The laboratory indicated that the PCBs resembled Aroclor 1260.

3.3.1.3 Black Head Tickle – Fin Fish

PCB and crude fat analysis was conducted on fillets from ten sculpin (11-SCULPIN-BHT1 to 11-SCULPIN-BHT10), three sculpin livers (11-SCULPIN LIVER-BHT1 to 11-SCULPIN LIVER-BHT3), ten rock cod fillets (11-ROCKCOD-BHT1 to 11-ROCKCOD-BHT10), and three rock cod livers (11-ROCKCOD LIVER-BHT1 to 11-ROCKCOD LIVER-BHT3) collected from Black Head Tickle. Maxxam Analytics Inc. also analysed two laboratory duplicate samples (11-ROCKCOD-BHT1 Lab-Dup, and 11-ROCKCOD-BHT2 Lab-Dup) for PCBs and one laboratory duplicate sample for crude fat (11-ROCKCOD LIVER-BHT3 Lab-Dup).

Analytical results indicated that concentrations of PCBs were detected in two of the three liver samples from the sculpin at concentrations of 0.1 mg/kg and 0.2 mg/kg. Concentrations of PCBs were detected in one of the three rock cod liver samples at a concentration of 0.1 mg/kg. Concentrations of PCBs were not detected in any of the sculpin or rock cod fillets submitted for analysis. The laboratory indicated that the PCBs, where detected, resembled Aroclor 1260.

3.3.1.4 Tooktoosner Bay – Fin Fish

PCB and crude fat analysis was conducted on fillets from ten sculpin (11-SCULPIN-TB1 to 11-SCULPIN-TB10), three sculpin livers (11-SCULPIN LIVER-TB1 to 11-SCULPIN LIVER-TB3), ten rock cod fillets (11-ROCKCOD-TB1 to 11-ROCKCOD-TB10), and three rock cod livers (11-ROCKCOD LIVER-TB1 to 11-ROCKCOD LIVER-TB3), three Atlantic salmon fillets (11-SALMON-TB1 to 11-SALMON-TB3) and three Atlantic salmon livers (11-SALMON LIVER-TB1 to 11-SALMON LIVER-TB3) collected from Tooktoosner Bay. Maxxam Analytics Inc. also analysed two laboratory duplicate samples (11-ROCKCOD-TB2 Lab-Dup and 11-SCULPIN LIVER-TB1 Lab-Dup) for PCBs and two laboratory duplicate samples (11-ROCKCOD LIVER-TB2 Lab-Dup and 11-SALMON LIVER-TB2 Lab-Dup) for crude fat.

Analytical results indicated that concentrations of PCBs were detected in two of the three liver samples from the sculpin at a concentration of 0.1 mg/kg. Concentrations of PCBs were detected in all three rock cod liver samples with concentrations ranging from 0.1 mg/kg to 0.2 mg/kg. Concentrations of PCBs were not detected in any of the rock cod fillet samples, sculpin fillet samples, Atlantic salmon fillet samples or the Atlantic salmon liver samples submitted for analysis. The laboratory indicated that the PCBs, where detected, resembled Aroclor 1260.

3.3.2 Shellfish

Samples of mussels and clams were collected from Southwest Bays, Black Head Tickle, and Tooktoosner Bay in August, 2011. A summary of shellfish collected and shellfish selected for analysis of PCBs is presented in Table 2.2. Sample locations are shown on Drawing No. 121411777.210-EE-02 and Drawing No. 121411777.210-EE-03, Appendix A. Results of laboratory analysis of PCBs in shellfish are presented in Table C.6, Appendix C. Corresponding analytical reports are presented in Appendix D.

3.3.2.1 Southwest Bays - Shellfish

Analysis for PCBs and crude fat was conducted on three mussel samples from Area 1 of the Southwest Bays (11-MUSSELS-SBA(I)1 to 11-MUSSELS-SBA(I)3) and three mussel samples from Area 2 of the Southwest Bays (11-MUSSELS-SBA(II)1 to 11-MUSSELS-SBA(II)3). PCB analysis was also conducted on three clam samples from Area 1 of the Southwest Bays (11-CLAMS-SBA(I)1 to 11-CLAMS-SBA(I)3) and three clam samples from Area 2 of the Southwest Bays (11-CLAMS-SBA(II)1 to 11-CLAMS-SBA(II)3. Maxxam Analytics Inc. also analysed a laboratory duplicate sample (11-CLAMS-SBA(I)2 Lab-Dup) for crude fat.

Analytical results indicated that detectable concentrations of PCBs were present in all three of the mussel samples from Area 1 and all three of the mussel samples from Area 2 with concentrations ranging from 0.21 mg/kg to 0.25 mg/kg in Area 1 and from 0.12 mg/kg to 0.16 mg/kg in Area 2. Concentrations of PCBs were detected in two of the three clam samples from Area 1 at concentrations of 0.05 mg/kg and 0.07 mg/kg. Concentrations of PCBs were detected in two of the three clam samples from Area 2 at concentrations of 0.05 mg/kg and 0.06 mg/kg. The laboratory indicated that the PCBs resembled Aroclor 1260.

3.3.2.2 Black Head Tickle - Shellfish

Analysis for PCBs and crude fat was conducted on one mussel sample from Black Head Tickle (11-MUSSELS-BHT1). Concentrations of PCBs were not detected in the mussel sample.

3.3.2.3 Tooktoosner Bay - Shellfish

Analysis for PCBs and crude fat was conducted on one mussel sample (11-MUSSELS-TB1) and one clam sample (11-CLAMS-TB1) from Tooktoosner Bay. Concentrations of PCBs were not detected in the samples.

3.4 Underwater Video Results

During sediment core sampling, divers recorded video of the ocean bottom. Locations where underwater video was recorded are shown on Drawing No. 121411777-EE-04, Appendix A. Visibility was poor in the underwater video recordings due to high turbidity. The quality of the video for determining conditions in the sedimentary and water column environments was therefore considered to be low. Some debris was visible on the ocean floor in the video.

4.0 CONCLUSIONS

Stantec Consulting Ltd. conducted a Marine Study at Hopedale Harbour located in Hopedale, NL. The Marine Study was carried out as part of the Implementation of Remedial Action Plan – Years 1-3 and Marine Study at the Former US Military Base and Residential Subdivision Area in Hopedale, NL.

Results of the Marine Study are summarized below:

Flux Monitoring

- Flux monitoring including measurements of flow, total suspended solids, turbidity, and PCB concentrations was conducted on a bi-weekly basis from August 28, 2011 to November 16, 2011 as well as following two storm events which occurred on August 30, 2011 and September 16, 2011. The results of the three year flux study will be used to construct a sediment transport model to evaluate the potential for redistribution and burial of PCBs in harbour sediments.

Sediment Sampling

- Concentrations of PCBs in sixty surface sediment samples (11-SED1 to 11-SED44, 11-SED46 to 11-SED54, and 11-SED56 to 11-SED62) from Hopedale Harbour and the surrounding areas ranged from <0.01 mg/kg in several sediment samples to 0.56 mg/kg in 11-SED14.
- The concentrations of PCBs in sixteen sediment samples (11-SED2, 11-SED4 to 11-SED8, 11-SED11-11-SED15, 11-SED18, 11-SED19, 11-SED21, 11-SED22 and 11-SED26) exceeded the CCME PEL.
- Concentrations of PCBs exceeding the CCME PEL were generally detected in sediment samples collected from the inner portion of Hopedale Harbour (*i.e.*, the Inner Harbour) with the highest concentrations detected immediately north of the wharf (11-SED6 (0.51 mg/kg) and 11-SED14 (0.56 mg/kg)).
- Concentrations of PCBs were generally not detected in sediment samples from the Outer Harbour.
- PCBs were not detected in sediment samples from Tooktoosner Bay (11-SED58), Uvidluk Cove (11-SED59), or Black Head Tickle (11-SED60).

- PCB congener analysis of six sediment samples (11-SED3, 11-SED7, 11-SED14, 11-SED20, 11-SED-2, 11-SED39) indicated that the sum of the total congeners ranged from 4.38 ng/g (11-SED32) to 560 ng/g (11-SED14). The most abundant congeners were PCB153/168, PCB129/138/163, PCB147/149. PCB180/193, and PCB187.
- Concentrations of PCBs in five sediment core samples (C1-A to C5-A) from Hopedale Harbour ranged from <0.01 in several samples to 4.4 mg/kg in C4-A-09 collected at a depth of 9.5 cm to 10.7 cm.
- Two duplicate core samples (C2-B and C5-B) were submitted to LANSET at the University of Ottawa for radiometric lead-210 dating. The lead-210 dating will be used in association with other data collected from Hopedale Harbour over the three year study (*i.e*., flux results, PCB concentrations) to estimate when the greatest flux of PCB to the Harbour occurred. The results of the three year study will be used to construct a sediment transport model to evaluate the potential for redistribution and burial of PCBs in harbour sediments.

Marine Biota Sampling

- Samples of various finfish including shorthorn sculpin, rock cod, flatfish, Atlantic salmon, Arctic char, and Atlantic cod were collected from Hopedale Harbour (the Inner Harbour and the Outer Harbour), Black Head Tickle, Uvidluk Cove, Tooktoosner Bay and an unnamed reference site located 17 km southwest of Hopedale Harbour in August, 2011.

Inner Harbour

- Concentrations of PCBs in three sculpin liver samples from the Inner Harbour ranged from 3.3 mg/kg to 8.1 mg/kg.
- Concentrations of PCBs in three rock cod liver samples from the Inner Harbour ranged from 20 mg/kg to 34 mg/kg.
- Concentrations of PCBs were detected in eight of the ten sculpin fillet samples analysed from the Inner Harbour with concentrations ranging from 0.05 mg/kg to 0.99 mg/kg.
- Concentrations of PCBs were detected in nine of the ten rock cod fillet samples analysed from the Inner Harbour with concentrations ranging from 0.1 mg/kg to 0.72 mg/kg.
- The laboratory indicated that the PCBs resembled Aroclor 1260.

Outer Harbour

- Concentrations of PCBs in three sculpin liver samples collected from the Outer Harbour ranged from 0.25 mg/kg to 0.54 mg/kg.
- Concentrations of PCBs in three rock cod liver samples collected from the Outer Harbour ranged from 5.8 mg/kg to 21 mg/kg.
- Concentrations of PCBs were detected in three of the ten sculpin fillet samples from the Inner Harbour and ranged from 0.05 mg/kg to 0.23 mg/kg.

- Concentrations of PCBs were detected in nine of the ten rock cod fillet samples with concentrations ranging from 0.06 mg/kg to 1.1 mg/kg.
- The laboratory indicated that the PCBs resembled Aroclor 1260.

Black Head Tickle

- Concentrations of PCBs were detected in two of three sculpin liver samples analyzed from Black Head Tickle at concentrations of 0.1 mg/kg to 0.2 mg/kg.
- Concentrations of PCBs were detected in one of three rock cod liver samples analyzed from Black Head Tickle at a concentration of 0.1 mg/kg.
- Concentrations of PCBs were not detected in sculpin or rock cod fillets from Black head Tickle.
- The laboratory indicated that the PCBs, where detected, resembled Aroclor 1260.

Tooktoosner Bay

- Concentrations of PCBs were detected in two of the three sculpin liver samples at a concentration of 0.1 mg/kg.
- Concentrations of PCBs were detected in all three rock cod liver samples with concentrations ranging from 0.1 mg/kg to 0.2 mg/kg.
- Concentrations of PCBs were not detected in any of the rock cod fillet samples, sculpin fillet samples, Atlantic salmon fillet samples or the Atlantic salmon liver samples submitted for analysis.
- The laboratory indicated that the PCBs, where detected, resembled Aroclor 1260.

Shellfish

Southwest Bays

- Concentrations of PCBs were detected in six mussel samples from the Southwest Bays with concentrations ranging from 0.12 mg/kg to 0.25 mg/kg.
- Concentrations of PCBs were detected in four of the six clam samples analysed from the Southwest Bays with concentrations ranging from 0.05 mg/kg to 0.07 mg/kg.
- The laboratory indicated that the PCB, where detected, resembled Aroclor 1260.

Black Head Tickle

- Concentrations of PCBs were not detected in one mussel sample analysed from Black Head Tickle.

Tooktoosner Bay

- Concentrations of PCBs were not detected in one clam and one mussel sample analyzed from Tooktoosner Bay.

Underwater Video

Visibility was poor in the underwater video recordings due to high turbidity. The quality of the video for determining conditions in the sedimentary and water column environments was therefore considered to be low. Some debris was visible on the ocean floor in the video.

5.0 CLOSURE

This report is for the exclusive use of Newfoundland and Labrador Department of Environment and Conservation, and no other party shall have any right to rely on any service provided by Stantec Consulting Ltd. without prior written consent from Newfoundland and Labrador Department of Environment and Conservation and Stantec Consulting Ltd.

All parties are subject to the same limit of liability as agreed to in the Stantec Standard Terms and Conditions. Any use which a third party makes of this report, or any reliance on decisions made based on it, is the responsibility of such third parties. Stantec accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken based on this report.

Some of the information presented in this report was provided through existing documents. Although attempts were made, whenever possible, to obtain a minimum of two confirmatory sources of information, Stantec in certain instances has been required to assume that the information provided is accurate.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Stantec based on the data obtained during the assessment. Due to the nature of assessment and the limited data available, Stantec cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be construed as legal advice.

The conclusions presented in this report represent the best technical judgement of Stantec based on the data obtained from the work. The conclusions are based on the site conditions encountered by Stantec at the time the work was performed at the specific testing and/or sampling locations, and can only be extrapolated to an undefined limited area around these locations. The extent of the limited area depends on the soil and groundwater conditions, as well as the history of the site reflecting natural, construction and other activities. In addition,

analysis has been carried out for a limited number of chemical parameters, and it should not be inferred that other chemical species are not present.

Should additional information become available which differs significantly from our understanding of conditions presented in this report, we request that this information be brought to our attention so that we may reassess the conclusions provided herein. This report was prepared by Kelly Johnson, Ph.D. and Anna Roy, B.Sc.E., and reviewed by Malcolm Stephenson, Ph.D., and Jim Slade, P.Eng., P.Geo.

Respectfully submitted,

STANTEC CONSULTING LTD.

Kelly Johnson, Ph.D.
Environmental Scientist

Jim Slade, P.Eng., P.Geo.
Group Leader, Site Assessment and Remediation

6.0 REFERENCES

Stantec. 2010. Phase II/III Environmental Site Assessment, Human Health and Ecological Risk Assessments, and Remedial Action/Risk Management Plan for the Former US Military Site and Residential Subdivision at Hopedale, Labrador. Stantec Report No. 121410103. Dated May 17, 2010.

Stantec. 2011. Marine Sediment and Biota Sampling, Hopedale, NL. Stantec Letter Report No. 121411170. Dated February 28, 2011.

APPENDIX A

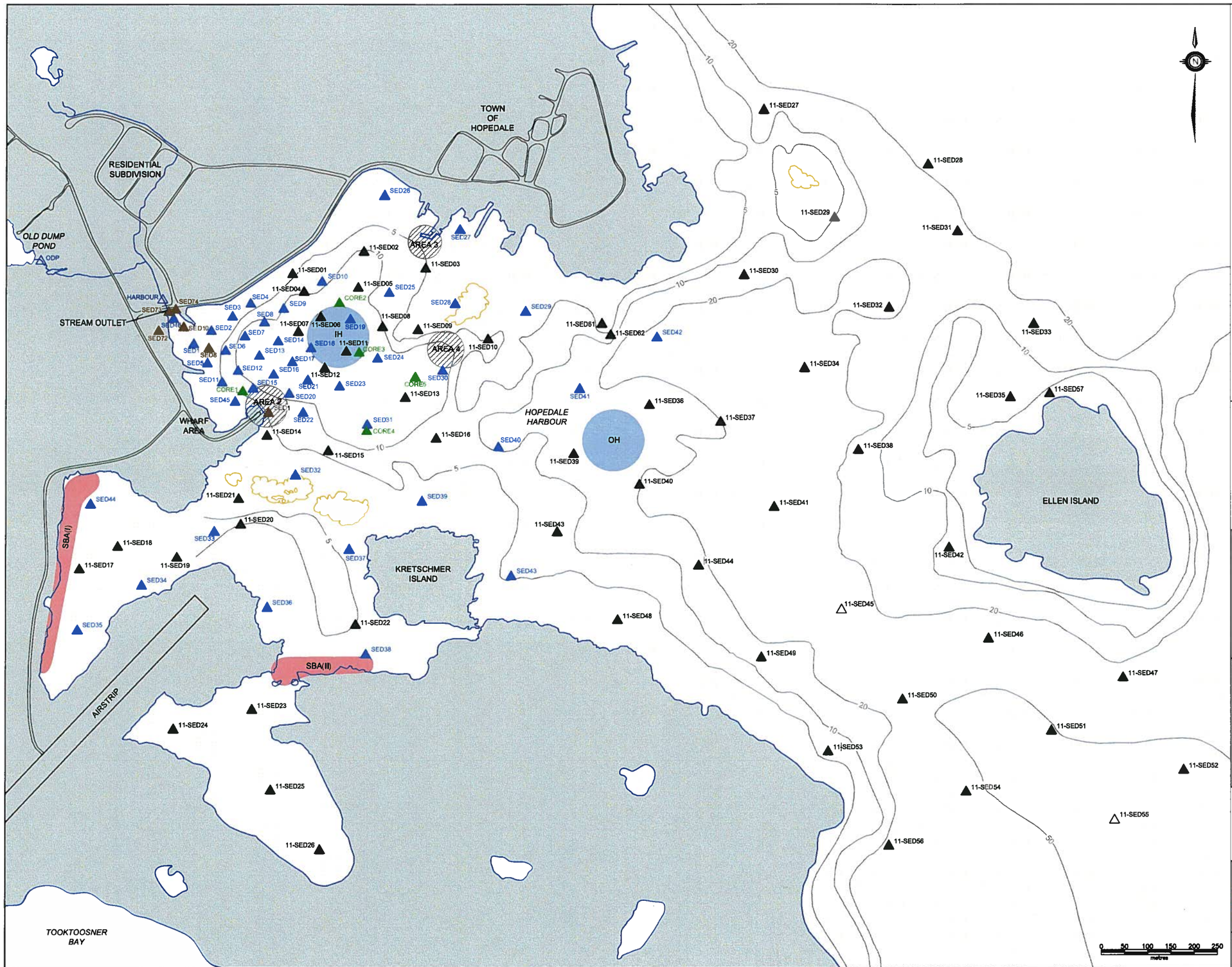
Drawings

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

CLIENT: NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION	SCALE: 1:50,000
	DATE: MAR. 30, 2012
	DRAWN BY: N.M.
	CHECKED BY: KJ
PROJECT TITLE: MARINE STUDY - HOPEDALE HARBOUR, HOPEDALE, NL	EDITED BY: -
	REV. No. 0
DRAWING TITLE: SITE LOCATION PLAN	DRAWING No: 121411777.210-EE-01
	CAD FILE: 121411777_210-EE-01.DWG

Stantec

30MAR12 2:00PM



LEGEND

- GRAB SEDIMENT SAMPLE LOCATION (STANTEC, 2011)
- UNSUCCESSFUL GRAB SEDIMENT SAMPLE LOCATION (STANTEC, 2011)
- CORE SEDIMENT SAMPLE LOCATION (STANTEC, 2011)
- FLUX SAMPLE LOCATION (STANTEC, 2011)
- GRAB SEDIMENT SAMPLE LOCATION (STANTEC, 2010)
- GRAB SEDIMENT SAMPLE LOCATION (STANTEC, 2009)
- FISH SAMPLE LOCATION (STANTEC, 2010)
- FISH SAMPLE LOCATION (STANTEC, 2011)
- SHELLFISH SAMPLE LOCATION (STANTEC, 2011)
- 5 DEPTH CONTOUR (m)
- SHOALS

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

CLIENT:

NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION

PROJECT TITLE:

MARINE STUDY - HOPEDALE HARBOUR, HOPEDALE, NL

DRAWING TITLE:

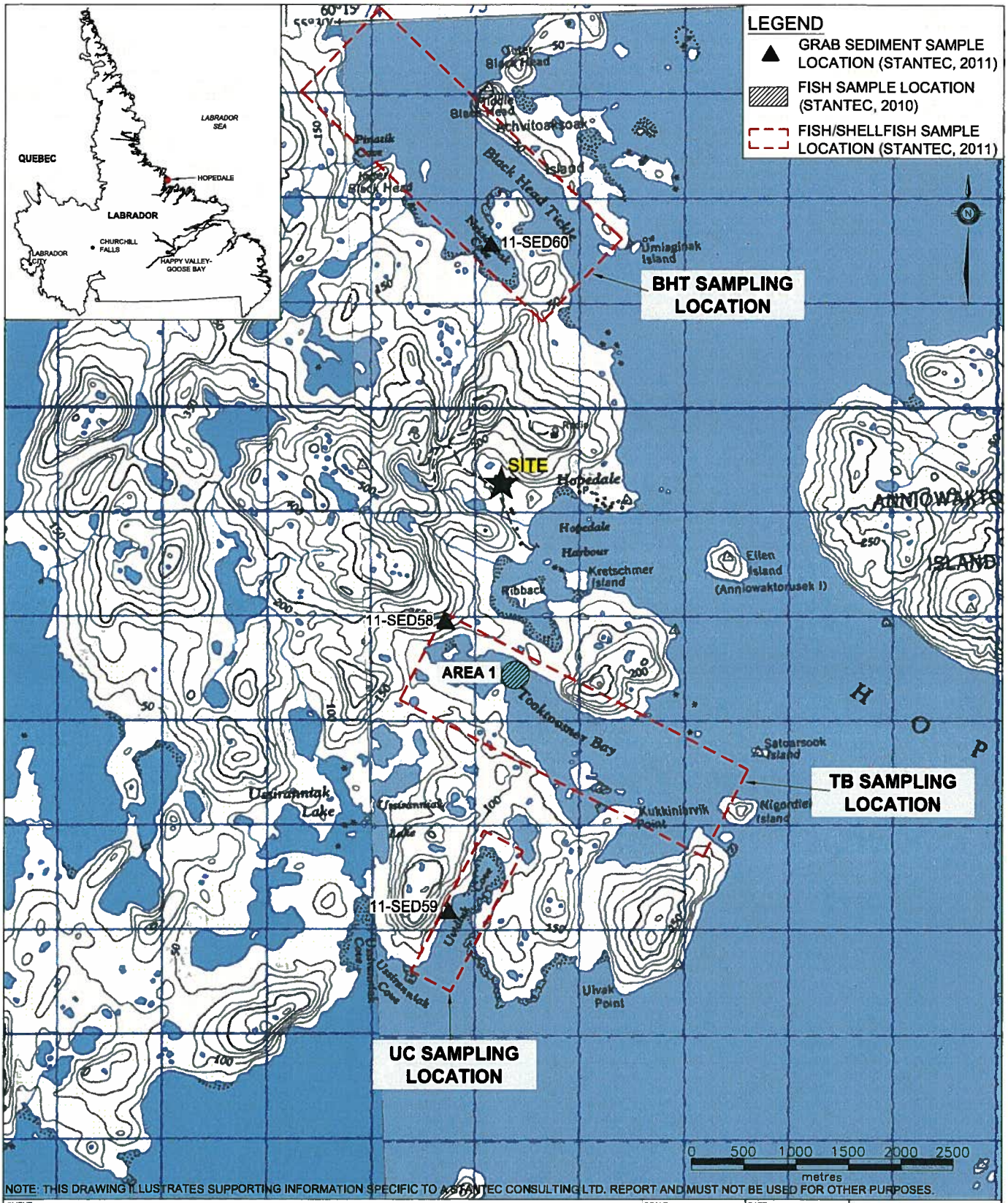
SAMPLE LOCATION PLAN - HOPEDALE HARBOUR

Stantec Consulting Ltd.

SCALE: 1:8000	DATE: MAR. 30, 2012
DRAWN BY: N.M.	CHECKED BY: KG
EDITED BY: -	REV. No: 0
DRAWING No: 121411777.210-EE-02	
CAD FILE: 121411777_210-EE-02.DWG	

Stantec

30MAR12 12:00PM



CLIENT: NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION

PROJECT TITLE: MARINE STUDY - HOPEDALE HARBOUR, HOPEDALE, NL

DRAWING TITLE: SAMPLE LOCATION PLAN - BACKGROUND LOCATIONS

SCALE: 1:50,000	DATE: MAR. 30, 2012
DRAWN BY: N.M.	CHECKED BY: KS
EDITED BY: -	REV. No. 0
DRAWING No: 121411777.210-EE-03	
CAD FILE: 121411777_210-EE-03.DWG	

Stantec

30MAR12 9:00AM

LEGEND

- UNDERWATER VIDEO TRAJECTORY
- 5 DEPTH CONTOUR (m)
- SHOALS

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

CLIENT:

NEWFOUNDLAND AND LABRADOR
DEPARTMENT OF
ENVIRONMENT AND CONSERVATION

PROJECT TITLE:

MARINE STUDY - HOPEDALE HARBOUR
HOPEDALE, NL

DRAWING TITLE:

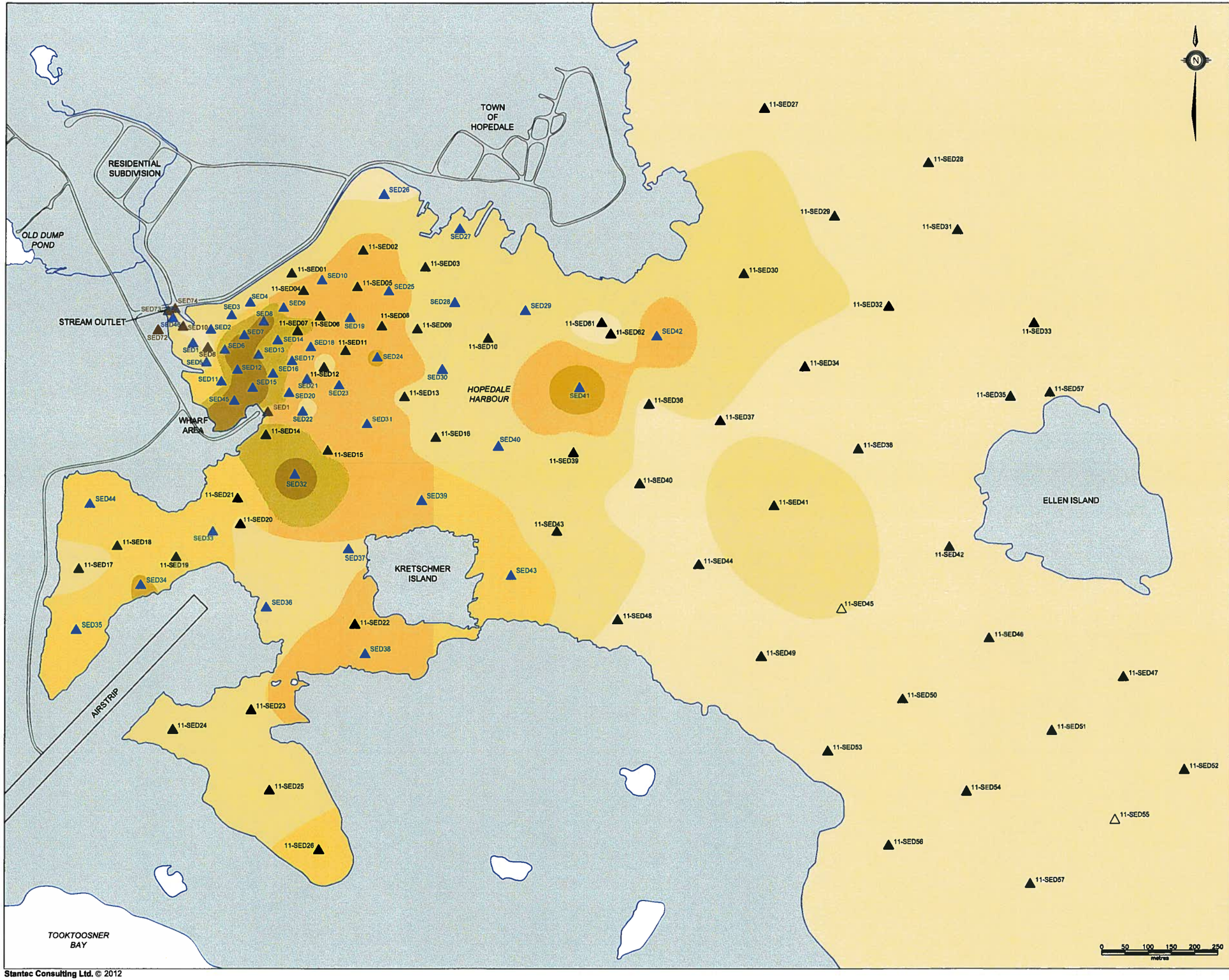
UNDERWATER VIDEO TRAJECTORY -
HOPEDALE HARBOUR

Stantec Consulting Ltd.

SCALE: 1:8000	DATE: MAR. 30, 2012
DRAWN BY: N.M.	CHECKED BY:
EDITED BY: -	REVISION: 0
DRAWING No: 121411777.210-EE-04	
CAD FILE: 121411777_210-EE-04.DWG	

Stantec

30MAR12 2:00PM



LEGEND

- GRAB SEDIMENT SAMPLE LOCATION (2011)
- UNSUCCESSFUL GRAB SEDIMENT SAMPLE LOCATION (2011)
- GRAB SEDIMENT SAMPLE LOCATION (STANTEC, 2010)
- GRAB SEDIMENT SAMPLE LOCATION (STANTEC, 2009)

PCB CONCENTRATION IN SEDIMENT (mg/kg)

- <0.0215 (*i.e.*,< CCME ISQG)
- 0.0215 - 0.189 (*i.e.*,< CCME PEL)
- 0.189 - 0.5
- 0.5 - 1
- >1.0

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

CLIENT:

NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION

PROJECT TITLE:

MARINE STUDY - HOPEDALE HARBOUR, HOPEDALE, NL

DRAWING TITLE:

POLYCHLORINATED BIPHENYL (PCB) CONCENTRATIONS - HOPEDALE HARBOUR

Stantec Consulting Ltd.

SCALE: 1:8000	DATE: MAR. 30, 2012
DRAWN BY: N.M.	CHECKED BY:
EDITED BY: -	REV. No: 0
DRAWING No: 121411777.210-EE-05	
CAD FILE: 121411777_210-EE-05.DWG	

Stantec

30MAR12 1:00PM

APPENDIX B

Permits

Fisheries and Oceans Canada | Pêches et Océans Canada

2011

Licences / Conditions and Vessel Registration(s)

This licence is issued under the authority of the Minister of Fisheries and Oceans Canada, and is not transferable.
This document authorizes the licence holder to engage in fishing and related activities on the Atlantic coast of Canada subject to the provisions of the Fisheries Act and Regulations.

Permis / conditions et immatriculation des bateaux

Ce permis est délivré sous l'autorité du ministre des Pêches et des Océans du Canada et n'est pas transférable.
Le présent document autorise le détenteur de permis à pêcher et à s'adonner à des activités connexes sur la côte Atlantique du Canada sous réserve des dipositions de la Loi et sur les pêches et des règlements afférents.

EXPERIMENTAL LICENCE

NL-793-11

Stantec Consulting Ltd
607 Torbay Road
St. John's, NL A1A 4Y6

Contact: Mr. James Slade (709) -576-1458

Pursuant to Section 52, of the Fishery (General) Regulations, permission is hereby granted to **Stantec Consulting Ltd.**, or their designate(s), to sample fish subject to the following conditions:

1. This licence is effective from **August 26, 2011 to October 30, 2011.**

2. **Purpose:** Site investigations require fish and sediment sampling to determine body burden contaminant levels.

3. **Location of Activity:** Hopedale, NL (See attached map)

4. **Species and Quantity:**

45 Rock Cod	45 Shorthorn sculpin
45 Flatfish	45 Herring
90 Capelin	30 Arctic char
3 x 150 g Mussels	3 x 150 g Clams
3 x 150 g Winkles	

Note: all species to be killed upon collection

Tissue samples are to be collected from animals that have already been harvested by local hunters for food purposes:

Harbour seals – tissue samples from up to 10 animals
Bottlenose dolphin – tissue samples from up to 10 animals
Harbour porpoise – tissue samples from up to 10 animals

5. **Gear to be used:** Rock Cod, sculpin, flatfish, herring and capelin will be collected by rod and reel/baited hook and tended gill nets. Char will be collected using nylon netting along the shoreline. All gear is to be marked with the Experimental # **NL-793-11.**

6. **Type of Biological Sampling:** Fillet, liver and whole fish samples will be submitted for analysis of PCB's and lipid content. Shellfish will be shucked and submitted for analysis of PCB's.

7. **Designates:** Jim Slade, Anna Roy, Dale Conroy, Dave Blanchard and Robert Perry.

8. If there are any unusual mortalities or diseases identified, notify: Dr. John Brattey, Fish Health Protection Officer, Fisheries and Oceans Canada, PO Box 5667, St. John's, NL, A1C 5X1.

9. An electronic report of catch information is to be sent to Chuck Bourgeois, Salmoniods Section, Oceans and Environment Branch, Fisheries and Oceans Canada. This report must include the

THIS DOCUMENT IS NOT A VALID LICENCE / REGISTRATION UNLESS SIGNED BY AN AUTHORIZED DFO AGENT

CE DOCUMENT N'EST PAS VALIDE S'IL N'EST PAS SIGNÉ UN AGENT AUTHORISÉ DU MPO.

Canada

REGIONAL MANAGER - LICENSING SERVICES
FISHERIES MANAGEMENT BRANCH

GESTIONNAIRE RÉGIONAL
SERVICES D'AUTORISATION

Licences / Conditions and Vessel Registration(s)

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This document authorizes the licence holder to engage in fishing and related activities on the Atlantic coast of Canada subject to the provisions of the Fisheries Act and Regulations.

Permis / conditions et immatriculation des bateaux

Ce permis est délivré sous l'autorité du ministre des Pêches et des Océans du Canada et n'est pas transférable.
Le présent document autorise le détenteur de permis à pêcher et à s'adonner à des activités connexes sur la côte Atlantique du Canada sous réserve des dipositions de la Loi et sur les pêches et des règlements afférents.

EXPERIMENTAL LICENCE

NL-793-11

Stantec Consulting Ltd
607 Torbay Road
St. John's, NL A1A 4Y6

Contact: Mr. James Slade (709) -576-1458

area fished, the dates fished, numbers caught, gear type, results of sampling, etc. for each species and shall be submitted within 90 days of the licence end date.

10. Prior to activities taking place, the Supervisor, Conservation and Protection must be notified (**Goose Bay, 896-6153**).

11. Fish caught under the authority of this licence cannot be sold or retained for any other purposes other than those stated in this licence.

1. Requests for amendments to this licence (i.e. changes or additions to species, quantities, gear etc.) must be made in writing to Diane White, A/Regional Manager – Licensing Services, Fisheries and Oceans Canada, (fax: 772-5133, phone: 772-3687) or email experimentallicenses@dfo-mpo.gc.ca

12. This licence must be carried at all times and must be produced for inspection upon request of a Fishery Officer.

13. Fisheries and Oceans Canada employees named in this licence may be contacted at PO Box 5667, St. John's, NL, A1C 5X1.

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CE DOCUMENT N'EST PAS VALIDE S'IL N'EST PAS SIGNÉ UN AGENT AUTHORISÉ DU MPO.

Canada

REGIONAL MANAGER - LICENSING SERVICES
FISHERIES MANAGEMENT BRANCH

GESTIONNAIRE RÉGIONAL
SERVICES D'AUTORISATION

Fisheries and Oceans Canada | Pêches et Océans Canada

2011

Licences / Conditions and Vessel Registration(s)

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This document authorizes the licence holder to engage in fishing and related activities on the Atlantic coast of Canada subject to the provisions of the Fisheries Act and Regulations.

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Le présent document autorise le détenteur de permis à pêcher et à s'adonner à des activités connexes sur la côte Atlantique du Canada sous réserve des dipositions de la Loi et sur les pêches et des règlements afférents.

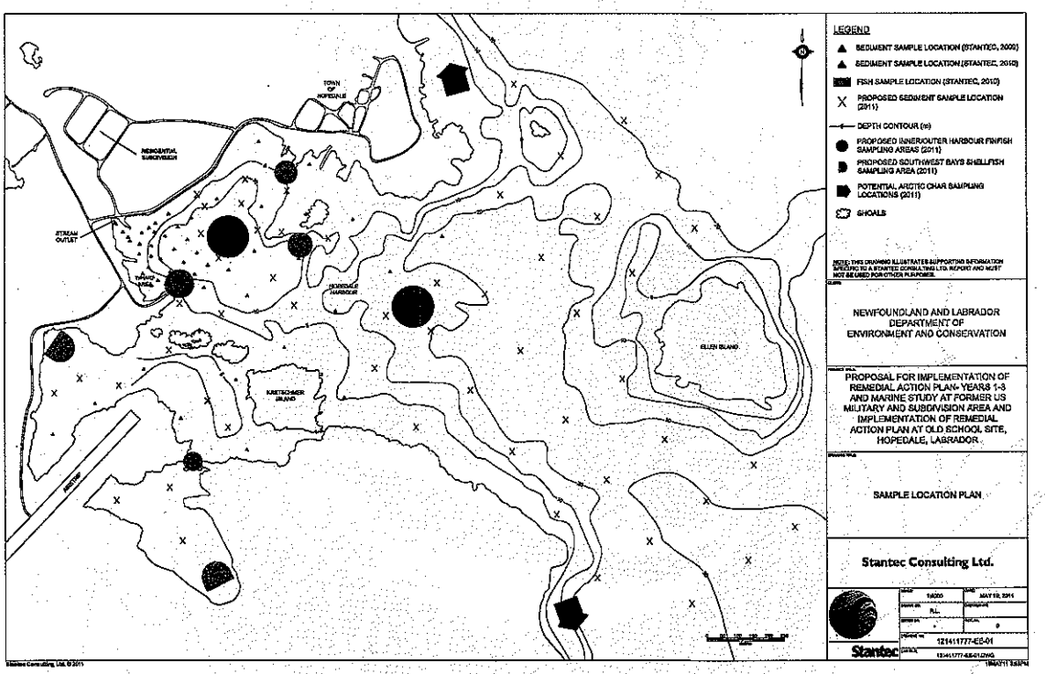
EXPERIMENTAL LICENCE

NL-793-11

Stantec Consulting Ltd
607 Torbay Road
St. John's, NL A1A 4Y6

Contact: Mr. James Slade (709) -576-1458

Figure 1.



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FISHERIES MANAGEMENT BRANCH

GESTIONNAIRE RÉGIONAL
SERVICES D'AUTORISATION

Fisheries and Oceans Canada | Pêches et Océans Canada

2011

Licences / Conditions and Vessel Registration(s)

This licence is issued under the authority of the Minister of Fisheries and Oceans Canada, and is not transferable.
This document authorizes the licence holder to engage in fishing and related activities on the Atlantic coast of Canada subject to the provisions of the Fisheries Act and Regulations.

Permis / conditions et immatriculation des bateaux

Ce permis est délivré sous l'autorité du ministre des Pêches et des Océans du Canada et n'est pas transférable.
Le présent document autorise le détenteur de permis à pêcher et à s'adonner à des activités connexes sur la côte Atlantique du Canada sous réserve des dipositions de la Loi et sur les pêches et des règlements afférents.

SPECIES AT RISK ACT (SARA)
SECTION 73 SCIENTIFIC PERMIT
NORTHERN AND SPOTTED WOLFFISH AND LEATHERBACK TURTLE

Experimental Licence
NL-793-11

Stantec Consulting Ltd
607 Torbay Road
St. John's NL A1A 4Y6

Contact: Mr. Jim Slade (709) 576-1458

This Permit is issued to you under the authority of the Minister of Fisheries and Oceans pursuant to Section 73 of the ***SPECIES AT RISK ACT (SARA).***

This permit authorizes you, subject to the following conditions, to engage in fishing activities that
(a) are conducted under licences issued to you under the *Fisheries Act*, and
(b) incidentally kill, harm, harass, capture or take **Northern Wolffish** (*Anarhichas denticulatus)* **or Spotted Wolffish** (*Anarhichas minor*) or **Leatherback Turtle** (*Dermochelys coriacea*).

Pursuant to subsection 73(2) of SARA, the following conditions apply to this permit:

1. This permit is only valid while fishing is conducted under the Scientific (Experimental) licences issued to you under the Fisheries Act for any of the following species in NAFO Division 3L

   Identify species:

   Multiple Species

2. You are authorized to retain Northern Wolffish and Spotted Wolffish and Leatherback Turtle for the purposes of collecting scientific data. However, should you not wish to retain Wolffish or Leatherback Turtle for the collection of scientific data, then you should forthwith return them to the place from which they were taken, and where they are alive, in a manner that causes them the least harm. You are also authorized to retain wolffish for the purpose of providing them to Science Branch, DFO (Mark Simpson).

3. You shall ensure that this permit is attached to the fishing licences you have been issued for any of the species listed under item 1.

4. You are required to collect and subsequently report to DFO, Science Branch, NL Region the following information. This may be provided in the logbook or separately to DFO. PLEASE REPORT NORTHERN WOLFFISH AND SPOTTED WOLFFISH AND LEATHERBACK TURTLE SEPARATELY:
   a) The quantity and weight of each species caught
   b) The quantity and weight of each species retained
   c) Date of capture
   d) Location of capture
   e) Gear used

5. Unless amended, this permit is valid from August 26, 2011 to September 15, 2011.

This licence is not a valid document unless signed by an authorized DFO agent.

THIS DOCUMENT IS NOT A VALID LICENCE / REGISTRATION UNLESS SIGNED BY AN AUTHORIZED DFO AGENT

CE DOCUMENT N'EST PAS VALIDE S'IL N'EST PAS SIGNÉ UN AGENT AUTHORISÉ DU MPO.

Canada

REGIONAL MANAGER - LICENSING SERVICES
FISHERIES MANAGEMENT BRANCH

GESTIONNAIRE RÉGIONAL
SERVICES D'AUTORISATION

Nunatsiavut
kavamanga Government

Nunamik amma Nunamiutanik

Lands and Resources

Permit to Access Labrador Inuit Lands **Application #: NG_____**

Name: Stentec

Date of Birth: _____

Address: St Johns

Telephone: (576) _____

Hereby applies for access to Labrador Inuit Lands, specifically in the area of:

Hopedale

for the period: Aug 20 11 to Sept 2 20 11

for the purpose of fishing, Shellfish Collection

I agree to the terms and conditions governing access to Labrador Inuit Lands as set out in the Labrador Inuit Land Claims Agreement under chapter 4 section 15.2.

[signature] Aug 22/11

Signature of Applicant Date

Permission is hereby granted to the Applicant to enter the Labrador Inuit Lands at the places and times and for the purposes set out above, subject to the terms and conditions below (or attached):

_____

_____

_____

_____

_____.

[signature] Aug 22

Approving Officer Date
Nunatsiavut Government

17 Sandbanks Road, PO Box 70, Nain, NL, Canada A0P 1L0 • Tel: 709.922.2942 Fax: 709.922.2931 • Email: nain_reception@nunatsiavut.com

Makkovik PO Box 92 Makkovik, NL A0P 1J0 Tel: 709.923.2566
Hopedale PO Box 91 Hopedale, NL A0P 1G0 Tel: 709.933.3777
Rigolet PO Box 47 Rigolet, NL A0P 1P0
Postville General Delivery Postville, NL
Happy Valley - Goose Bay 1A Hillcrest Road, PO Box 909
North West River

APPENDIX C

Analytical Summary Tables

Table C.1 Results of Laboratory Analysis of Surface Water - Flux Study
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Sampling Date	Sample ID	Flow	Total Suspended Solids	Turbidity	Polychlorinated Biphenyls (PCBs)	Comments
	RDL	-	1	0.1	0.05	-
	Units	m^3/s	mg/L	NTU	µg/L	-
ODP						
28-Aug-11	ODP-AUG28	0.01	10	1.5	nd	-
	ODP-AUG28 FIELD DUP		8	1.5	nd	-
30-Aug-11 (Storm event)	ODP-AUG30-1:00AM	0.04	5	1.7	nd	-
	ODP-AUG30-6:00AM	0.21	5	1.5	nd	-
12-Sep-11	ODP-SEPT12	0.01	nd (2)	1.7	nd	-
16-Sep-11 (Storm event)	ODP-SEPT16	0.03	3	1.4	nd (0.06)	-
27-Sep-11	ODP-SEPT27	0.02	3	2.3	nd	-
	ODP-SEPT27 Lab-Dup		-	-	nd	-
10-Oct-11	ODP-OCT10	0.07	2	0.9	nd (0.06)	-
24-Oct-11	ODP-OCT24	0.02	2	0.6	nd	-
7-Nov-11	ODP-NOV7	0.01	1	0.8	nd	-
16-Nov-11	ODP-NOV16/11	0.6	nd	0.6	nd (0.06)	-
	ODP-NOV16/11 Lab-Dup		-	-	nd	-
HARBOUR						
28-Aug-11	HARBOUR-AUG28	0.02	4	1.6	nd	-
30-Aug-11 (Storm event)	HARBOUR-AUG30-1:00AM	0.09	11	11	nd	-
	HARBOUR-AUG30-6:00AM	0.16	nd (5)	4.0	0.06	Aroclor 1260
12-Sep-11	HARBOUR-SEPT12	0.02	3	2.3	nd	-
	HARBOUR-SEPT12 Lab-Dup		-	2.2	-	-
16-Sep-11 (Storm event)	HARBOUR-SEPT16	0.03	9	3.5	nd (0.06)	-
27-Sep-11	HARBOUR-SEPT27	0.02	2	1.5	nd	-
	HARBOUR-SEPT27 Lab-Dup		-	1.3	-	-
10-Oct-11	HARBOUR-OCT10	0.04	2	1.3	nd (0.06)	-
24-Oct-11	HARBOUR-OCT24	0.03	2	1.0	nd	-
7-Nov-11	HARBOUR-NOV7	0.01	3	2.7	nd	-
	HARBOUR-NOV7 Field Dup		2	2.6	nd	-
16-Nov-11	HARBOUR-NOV16/11	0.04	26	17	nd (0.06)	-
	HARBOUR-NOV16/11 Lab-Dup		-	19	-	-

Notes:
RDL = Reportable Detection Limit
nd = Not detected above standard RDL
nd (#) = Not detected above elevated RDL shown in brackets
Lab Dup = Laboratory duplicate sample

Table C.2 Results of Laboratory Analysis of PCBs in Sediment - Grab Sampling, Hopedale Harbour
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Sample ID	Polychlorinated Biphenyls (PCBs)	Organic Carbon (TOC)	Comments
RDL	0.01	0.2 to 1	-
Units	mg/kg	g/kg	-
Criteria[1]	0.0215	-	-
Criteria[2]	0.189	-	-
2009 Sampling - Stantec			
SED-1	**0.44**	-	-
SED-8	**nd (0.05)**	-	-
SED-10	**nd (0.1)**	-	-
SED-72	**0.34**	-	-
SED-73	**0.14**	-	-
SED-74	**0.3**	-	-
2010 Sampling - Stantec			
SED 1	**0.08**	1.9	-
SED 2	**0.06**	3.5	-
SED 3	**0.12**	15	-
SED 4	**0.15**	10	-
SED 5	**0.03**	0.8	-
SED 555 (Field duplicate of SED 5)	**0.39**	1	-
SED 6	**1.6**	21	-
SED 7	**1.2**	23	-
SED 8	**1.4**	20	-
SED 9	**0.42**	17	-
SED 9 Lab-Dup	**0.4**	-	-
SED 10	**0.21**	10	-
SED 11	**0.4**	21	-
SED 12	**1.5**	23	-
SED 13	**0.93**	22	-
SED 14	**0.53**	23	-
SED 15	**2.6**	17	-
SED 16	**0.62**	17	-
SED 17	**0.31**	14	-
SED 18	**0.36**	20	-
SED 188 (Fied Duplicate of SED 18)	**0.96**	-	-
SED 19	**0.26**	13	-
SED 20	**0.32**	12	-
SED 21	**0.27**	14	-
SED 22	**0.16**	6.4	-
SED 23	**0.26**	8.3	-
SED 24	**0.57**	21	-
SED 24 Lab-Dup	**0.47**	21	-
SED 25	**0.26**	11	-
SED 26	nd	3.3	-
SED 27	**0.05**	2.5	-
SED 28	**0.04**	4.9	-
SED 29	**0.08**	14	-
SED 299 (Field Duplicate of SED 29)	**0.4**	22	-
SED 30	**0.18**	7.9	-
SED 31	**0.26**	9.5	-
SED 32	**1.7**	13	-
SED 33	**0.31**	3.5	-
SED 34	**0.54**	18	-
SED 35	**0.34**	25	-
SED 355 (Field duplicate of SED 35)	**0.27**	23	-
SED 36	**0.05**	4.9	-

Table C.2 Results of Laboratory Analysis of PCBs in Sediment - Grab Sampling, Hopedale Harbour
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Sample ID	Polychlorinated Biphenyls (PCBs)	Organic Carbon (TOC)	Comments
RDL	0.01	0.2 to 1	-
Units	mg/kg	g/kg	-
Criteria[1]	0.0215	-	-
Criteria[2]	0.189	-	-
2010 Sampling - Stantec (cont.)			
SED 37	**0.07**	5.4	-
SED 38	**0.36**	25	-
SED 39	**0.33**	4.7	-
SED 40	**0.11**	11	-
SED 41	**1.0**	14	-
SED 42	**0.37**	3	-
SED 43	**0.45**	3.3	-
SED 44	**0.31**	4	-
SED 45	**2.3**	21	-
SED 46	**0.35**	2.7	-
2011 Sampling - Stantec			
11-SED1	**0.07**	3.9	Aroclor 1260
11-SED2	**0.30**	22	Aroclor 1260
11-SED3	**0.10**	11	-
11-SED-DUP2 (Field duplicate of 11-SED3)	**0.11**	7.3	Aroclor 1260
11-SED4	**0.40**	17	Aroclor 1260
11-SED5	**0.23**	16	Aroclor 1260
11-SED6	**0.51**	18	Aroclor 1260
11-SED6 Lab-Dup	**0.43**	-	-
11-SED7	**0.51**	18	Aroclor 1260
11-SED8	**0.25**	15	Aroclor 1260
11-SED-DUP3 (Field duplicate of 11-SED8)	**0.43**	14	Aroclor 1260
11-SED9	**0.06**	6.8	Aroclor 1260
11-SED10	**0.06**	5.8	Aroclor 1260
11-SED11	**0.26**	7.7	Aroclor 1260
11-SED12	**0.15**	5.3	Aroclor 1260
11-SED-DUP4 (Field duplicate of 11-SED12)	**0.05**	6.5	Aroclor 1260
11-SED-DUP4 Lab-Dup (Field duplicate of 11-SED12)	-	6.3	-
11-SED13	**0.16**	7.4	Aroclor 1260
11-SED14	**0.56**	5.0	Aroclor 1260
11-SED15	**0.46**	9.4	Aroclor 1260
11-SED16	**0.08**	6.9	Aroclor 1260
11-SED-DUP5 (Field duplicate of 11-SED16)	**0.08**	6.2	Aroclor 1260
11-SED17	**0.11**	17	Aroclor 1260
11-SED18	**0.22**	19	Aroclor 1260
11-SED19	**0.22**	15	Aroclor 1260
11-SED20	**0.17**	10	Aroclor 1260
11-SED21	**0.33**	15	Aroclor 1260
11-SED22	**0.24**	20	Aroclor 1260
11-SED23	**0.16**	21	Aroclor 1260
11-SED24	**0.05**	8.3	Aroclor 1260
11-SED25	**0.04**	19	Aroclor 1260
11-SED-DUP1 (Field duplicate of 11-SED25)	**0.11**	24	Aroclor 1260
11-SED26	**0.23**	3.6	Aroclor 1260
11-SED27	nd	13	-
11-SED28	nd	14	-
11-SED28 Lab-Dup	-	13	-
11-SED29	nd	5.4	-

Table C.2 Results of Laboratory Analysis of PCBs in Sediment - Grab Sampling, Hopedale Harbour
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Sample ID	Polychlorinated Biphenyls (PCBs)	Organic Carbon (TOC)	Comments
RDL	0.01	0.2 to 1	-
Units	mg/kg	g/kg	-
Criteria[1]	0.0215	-	-
Criteria[2]	0.189	-	-
2011 Sampling - Stantec (cont.)			
11-SED30	**0.05**	17	Aroclor 1260
11-SED-DUP6 (Field duplicate of 11-SED30)	nd	5.5	-
11-SED31	nd	7.9	-
11-SED32	nd	12	-
11-SED33	nd	22	-
11-SED34	nd	6.5	-
11-SED35	nd	7.4	-
11-SED36	nd	11	-
11-SED37	nd	2.9	-
11-SED38	nd	13	-
11-SED39	**0.06**	3.0	Aroclor 1260
11-SED40	nd	3.3	-
11-SED41	**0.06**	3.7	Aroclor 1260
11-SED42	nd	26	-
11-SED43	**0.04**	15	Aroclor 1260
11-SED44	nd	16	-
11-SED46	nd	7.4	-
11-SED47	nd	5.7	-
11-SED48	nd	1.1	-
11-SED49	nd	21	-
11-SED50	nd	6.3	-
11-SED51	nd	5.9	-
11-SED52	nd	5.0	-
11-SED52 Lab-Dup	nd	-	-
11-SED53	nd	9.3	-
11-SED54	nd	5.5	-
11-SED56	nd	4.0	-
11-SED57	nd	4.1	-
11-SED58	nd	19	-
11-SED59	nd	6.8	-
11-SED59 Lab-Dup	nd	-	-
11-SED60	nd	1.9	-
11-SED61	nd	8	-
11-SED62	nd	8.7	-
11-SED62 Lab-Dup	nd	-	-

Notes:
1 = Canadian Council of Ministers of the Environment (CCME) Interim Sediment Quality Guidelines (ISQGs) for marine sediment (200
2 = Canadian Council of Ministers of the Environment (CCME) Probable Effects Level (PEL) for marine sediment (2002)
RDL = Reportable Detection Limit for routine analysis
nd = Not detected above standard RDL
nd (#) = Not detected above elevated RDL shown in brackets
Lab-Dup = Laboratory duplicate sample
Bold = Value exceeds CCME ISQG, or parameter not detected and elevated RDL exceeds the CCME ISQG
Shaded/ Bold = Value exceeds CCME ISQG and CCME PEL

Table C.3 Results of Laboratory Analysis of PCB Congeners in Sediment - Grab Sampling, Hopedale Harbour
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Parameter	Units	Criteria[1]	Criteria[2]	11-SED3	EDL	11-SED7	EDL	11-SED14	EDL	11-SED20	EDL	11-SED32	EDL	11-SED39	EDL
2-MonoCB-(1)	ng/g	-	-	0.091	0.00013	0.01	0.00092	0.005	0.00093	0.009	0.00016	0.0010	0.00038	0.002	0.000089
3-MonoCB-(2)	ng/g	-	-	0.007	0.00014	0	0.00095	nd	0.0010	0.001	0.00016	0.0005	0.00039	nd	0.00051
4-MonoCB-(3)	ng/g	-	-	0.044	0.00014	0.01	0.00093	0.002	0.00095	0.004	0.00016	0.0007	0.00039	0.001	0.000090
22'-DiCB-(4)	ng/g	-	-	0.022	0.00038	nd	0.011	nd	0.0043	0.004	0.00057	0.0015	0.00078	0.011	0.00073
2,3-DiCB-(5)	ng/g	-	-	0.002	0.00085	nd	0.0074	nd	0.0032	nd	0.00088	0.0053	0.00066	nd	0.00053
2,3'-DiCB-(6)	ng/g	-	-	0.015	0.00078	nd	0.0070	nd	0.0025	0.002	0.00080	nd	0.00062	0.006	0.00051
2,4-DiCB-(7)	ng/g	-	-	0.006	0.00081	nd	0.0071	nd	0.0031	nd	0.00084	nd	0.00063	nd	0.00089
2,4'-DiCB-(8)	ng/g	-	-	0.048	0.00072	0.01	0.0065	0.009	0.0031	0.009	0.00074	nd	0.00058	0.016	0.00051
2,5-DiCB-(9)	ng/g	-	-	0.006	0.00074	nd	0.0069	nd	0.0030	nd	0.00073	nd	0.00062	nd	0.0013
2,6-DiCB-(10)	ng/g	-	-	0.003	0.00041	nd	0.012	nd	0.0049	nd	0.00061	nd	0.00085	0.001	0.00083
3,3'-DiCB-(11)	ng/g	-	-	0.016	0.00071	0.01	0.0066	0.031	0.0031	0.008	0.00074	0.0046	0.00059	0.005	0.00052
DiCB-(12)+(13)	ng/g	-	-	0.008	0.00079	nd	0.0070	nd	0.0031	nd	0.00082	nd	0.00062	nd	0.0019
3,5-DiCB-(14)	ng/g	-	-	nd	0.00071	nd	0.0066	nd	0.0030	nd	0.00074	nd	0.00059	nd	0.00050
4,4'-DiCB-(15)	ng/g	-	-	0.024	0.00095	nd	0.015	0.011	0.0044	0.009	0.00098	0.0028	0.00078	0.010	0.00073
22'3-TriCB-(16)	ng/g	-	-	0.004	0.00054	nd	0.0040	nd	0.0032	0.001	0.00019	0.0019	0.00036	0.002	0.00030
22'4-TriCB-(17)	ng/g	-	-	0.006	0.00053	nd	0.0056	nd	0.0046	0.002	0.00019	0.0026	0.00034	0.002	0.00031
TriCB-(18)+(30)	ng/g	-	-	0.009	0.00043	0.01	0.0031	nd	0.0092	0.003	0.00015	0.005	0.00029	0.004	0.00025
22'6-TriCB-(19)	ng/g	-	-	0.001	0.00045	nd	0.0031	nd	0.0027	0.001	0.00016	0.0008	0.00028	0.001	0.00025
TriCB-(20) + (28)	ng/g	-	-	0.022	0.00021	0.03	0.0029	0.02	0.00088	0.008	0.00013	0.018	0.00032	0.008	0.000096
TriCB-(21)+(33)	ng/g	-	-	0.011	0.00021	nd	0.011	0.01	0.00087	0.006	0.00013	0.006	0.00033	0.004	0.000094
234'-TriCB-(22)	ng/g	-	-	0.007	0.00022	nd	0.0067	nd	0.0048	0.002	0.00014	0.0029	0.00035	0.003	0.00010
235-TriCB-(23)	ng/g	-	-	nd	0.00023	nd	0.0032	nd	0.00095	nd	0.00014	nd	0.00035	nd	0.00010
236-TriCB-(24)	ng/g	-	-	nd	0.00041	nd	0.0028	nd	0.0026	nd	0.00015	nd	0.00026	nd	0.00024
23'4-TriCB-(25)	ng/g	-	-	0.002	0.00019	nd	0.0028	0.001	0.00083	0.001	0.00012	0.0013	0.00031	0.001	0.000090
TriCB-(26)+(29)	ng/g	-	-	0.004	0.00020	0.00	0.0030	0	0.00085	0.003	0.00012	0.001	0.00033	0.001	0.000093
23'6-TriCB-(27)	ng/g	-	-	nd	0.00088	nd	0.0025	nd	0.0023	nd	0.00061	0.0005	0.00023	0.00	0.00021
24'5-TriCB-(31)	ng/g	-	-	0.014	0.00020	0.02	0.0028	0.012	0.00081	nd	0.0045	0.0076	0.00031	0.006	0.000088
24'6-TriCB-(32)	ng/g	-	-	0.003	0.00035	nd	0.0024	nd	0.0034	0.001	0.00012	0.0032	0.00022	0.001	0.00020
23'5'-TriCB-(34)	ng/g	-	-	nd	0.00021	nd	0.0030	nd	0.00089	nd	0.00013	nd	0.00033	nd	0.000097
33'4-TriCB-(35)	ng/g	-	-	0.001	0.00021	nd	0.0030	nd	0.0025	0.001	0.00013	nd	0.00033	nd	0.00031
33'5-TriCB-(36)	ng/g	-	-	nd	0.00035	nd	0.0027	nd	0.00080	0.00	0.00011	nd	0.00029	nd	0.000087
344'-TriCB-(37)	ng/g	-	-	0.007	0.00024	0.01	0.0035	0.009	0.0011	0.003	0.00015	0.0025	0.00038	0.003	0.00012
345-TriCB-(38)	ng/g	-	-	nd	0.00021	nd	0.0031	nd	0.00091	nd	0.00013	nd	0.00034	nd	0.00010
34'5-TriCB-(39)	ng/g	-	-	nd	0.00020	nd	0.0029	nd	0.00087	0.00	0.00012	nd	0.00032	nd	0.000095
TetraCB-(40)+(41)+(71)	ng/g	-	-	0.022	0.00025	0.03	0.0043	0.03	0.0011	0.011	0.00042	0.005	0.00031	nd	0.0039
22'34'-TetraCB-(42)	ng/g	-	-	0.013	0.00027	0.01	0.0048	0.007	0.0012	0.005	0.00046	0.0035	0.00034	0.002	0.00012
22'35-TetraCB-(43)	ng/g	-	-	nd	0.00074	nd	0.0045	nd	0.0012	nd	0.00042	nd	0.00032	nd	0.00010
TetraCB-(44)+(47)+(65)	ng/g	-	-	0.070	0.00021	0.07	0.0038	0.05	0.00094	0.027	0.00036	0.015	0.00027	0.011	0.000093
TetraCB-(45)+(51)	ng/g	-	-	0.004	0.00024	0.01	0.0044	0	0.0011	0.002	0.00041	0.001	0.00031	0.001	0.00011
22'36'-TetraCB-(46)	ng/g	-	-	0.001	0.00028	nd	0.0050	nd	0.0010	0.001	0.00047	nd	0.00035	0.00	0.00013
22'45-TetraCB-(48)	ng/g	-	-	0.005	0.00025	0.01	0.0044	nd	0.0033	0.002	0.00042	0.0017	0.00032	0.001	0.00011
TetraCB-(49)+TetraCB-(69)	ng/g	-	-	0.058	0.00021	0.08	0.0037	0.04	0.00094	0.045	0.00035	0.019	0.00026	0.008	0.000093
TetraCB-(50)+(53)	ng/g	-	-	0.005	0.00024	nd	0.0066	0.01	0.0011	0.002	0.00040	0.001	0.00030	0.001	0.00011
22'55'-TetraCB-(52)	ng/g	-	-	0.179	0.00022	0.19	0.0042	0.203	0.0010	0.108	0.00037	0.0289	0.00030	0.029	0.000098
22'66'-TetraCB-(54)	ng/g	-	-	nd	0.00015	nd	0.0019	nd	0.00073	nd	0.00012	nd	0.00016	nd	0.00012
233'4-TetraCB-(55)	ng/g	-	-	0.001	0.00010	nd	0.0019	nd	0.00090	nd	0.00026	nd	0.00023	nd	0.000089
233'4'-Tetra CB(56)	ng/g	-	-	0.025	0.000087	0.03	0.0016	0.019	0.00077	0.012	0.00011	0.0032	0.00020	0.004	0.000078
233'5-TetraCB-(57)	ng/g	-	-	nd	0.000095	nd	0.0018	nd	0.00086	nd	0.00013	nd	0.00022	nd	0.000087
233'5'-TetraCB-(58)	ng/g	-	-	0.017	0.000098	0.09	0.0019	0.149	0.00089	0.032	0.00013	nd	0.00023	0.002	0.000090
TetraCB-(59)+(62)+(75)	ng/g	-	-	0.003	0.00018	0.00	0.0032	0.00	0.00082	0.002	0.00031	0.002	0.00023	0.001	0.000081
2344'-TetraCB -(60)	ng/g	-	-	0.013	0.00010	0.02	0.0020	0.009	0.00091	0.005	0.00013	0.0014	0.00023	0.002	0.000092
TetraCB-(61)+(70)+(74)+(76)	ng/g	-	-	0.203	0.000091	0.20	0.0018	0.12	0.00081	0.077	0.00012	0.028	0.00021	0.033	0.000083
234'5-TetraCB-(63)	ng/g	-	-	0.002	0.000090	nd	0.0018	0.001	0.00080	nd	0.00070	0.0008	0.00021	0.001	0.000081
234'6-TetraCB-(64)	ng/g	-	-	0.029	0.00018	0.03	0.0032	0.018	0.00082	0.010	0.00030	0.0041	0.00023	0.004	0.000081
23'44'-TetraCB-(66)	ng/g	-	-	0.086	0.000090	0.12	0.0018	0.070	0.00082	0.044	0.00012	0.0170	0.00021	0.013	0.000084
23'45-TetraCB-(67)	ng/g	-	-	0.002	0.000087	nd	0.0017	0.002	0.00079	0.005	0.00011	nd	0.00020	0.00	0.000080
23'45'-TetraCB-(68)	ng/g	-	-	0.001	0.000090	nd	0.0017	nd	0.0012	nd	0.00066	0.0010	0.00020	nd	0.00016
23'55'-TetraCB-(72)	ng/g	-	-	0.001	0.000090	nd	0.0023	0.002	0.00080	0.003	0.00012	0.0011	0.00021	0.00	0.000081
23'5'6-TetraCB-(73)	ng/g	-	-	nd	0.00020	nd	0.0033	nd	0.00083	nd	0.00034	nd	0.00024	nd	0.000082
33'44'-TetraCB-(77)	ng/g	-	-	0.019	0.00010	0.06	0.0021	0.098	0.0010	0.038	0.00014	0.0034	0.00024	0.002	0.00011
33'45-TetraCB-(78)	ng/g	-	-	nd	0.000096	nd	0.0019	nd	0.00087	nd	0.00013	nd	0.00022	nd	0.000088
33'45'-TetraCB(79)	ng/g	-	-	0.004	0.000086	0.01	0.0016	0.018	0.00075	nd	0.0085	nd	0.00019	nd	0.00065
33'55'-TetraCB-(80)	ng/g	-	-	nd	0.000085	nd	0.0017	0.022	0.00076	nd	0.00011	0.0005	0.00020	nd	0.000077

Table C.3 Results of Laboratory Analysis of PCB Congeners in Sediment - Grab Sampling, Hopedale Harbour (cont.)
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Parameter	Units	Criteria[1]	Criteria[2]	11-SED3	EDL	11-SED7	EDL	11-SED14	EDL	11-SED20	EDL	11-SED32	EDL	11-SED39	EDL
344'5-TetraCB-(81)	ng/g	-	-	0.00	0.00010	0.00	0.0020	nd	0.0010	nd	0.0016	nd	0.00024	nd	0.000074
22'33'4-PentaCB-(82)	ng/g	-	-	0.083	0.00025	0.10	0.0035	0.074	0.0018	0.034	0.00031	nd	0.0048	0.008	0.00018
PentaCB-(83)+(99)	ng/g	-	-	0.532	0.00022	1.45	0.0031	0.98	0.0015	0.727	0.00028	0.100	0.00042	0.054	0.00016
22'33'6-PentaCB-(84)	ng/g	-	-	0.173	0.00025	0.28	0.0035	0.327	0.0018	0.099	0.00031	0.0112	0.00048	0.017	0.00018
PentaCB-(85)+(116)+(117)	ng/g	-	-	0.125	0.00019	0.14	0.0025	0.10	0.0013	0.064	0.00023	0.012	0.00034	0.011	0.00013
PentaCB-(86)(87)(97)(109)(119)(125)	ng/g	-	-	0.555	0.00018	0.89	0.0025	1.21	0.0013	0.454	0.00023	0.048	0.00035	0.059	0.00013
PentaCB-(88)+(91)	ng/g	-	-	0.083	0.00022	0.12	0.0030	0.10	0.0015	0.063	0.00027	0.005	0.00041	0.008	0.00016
22'346'-PentaCB-(89)	ng/g	-	-	0.004	0.00023	nd	0.0073	nd	0.0077	0.003	0.00029	nd	0.00044	0.00	0.00017
PentaCB-(90)+(101)+(113)	ng/g	-	-	1.44	0.00018	4.36	0.0025	8.79	0.0013	2.88	0.00022	0.147	0.00034	0.151	0.00014
22'355'-PentaCB-(92)	ng/g	-	-	0.206	0.00022	0.54	0.0031	<0.0015	0.0015	0.352	0.00027	0.0268	0.00042	0.021	0.00016
PentaCB-(93)+(98)+(100)+(102)	ng/g	-	-	0.016	0.00021	0.04	0.0029	0.04	0.0015	0.018	0.00026	0.002	0.00040	0.002	0.00015
22'356'-PentaCB-(94)	ng/g	-	-	nd	0.0014	nd	0.0033	nd	0.0034	0.002	0.00029	nd	0.00046	0.00	0.00017
22'35'6-PentaCB-(95)	ng/g	-	-	0.856	0.00020	3.21	0.0028	6.75	0.0014	1.50	0.00025	0.0567	0.00039	0.086	0.00015
22'366'-PentaCB-(96)	ng/g	-	-	0.002	0.00014	0.00	0.0026	0.005	0.00069	0.002	0.00010	nd	0.00026	0.00	0.00021
22'45'6-PentaCB-(103)	ng/g	-	-	0.008	0.00019	0.04	0.0026	0.042	0.0013	0.036	0.00023	0.0045	0.00036	nd	0.0012
22'466'-PentaCB-(104)	ng/g	-	-	nd	0.00011	nd	0.0021	nd	0.00050	nd	0.000084	nd	0.00012	nd	0.00014
233'44'-PentaCB-(105)	ng/g	-	-	0.397	0.00024	0.63	0.0039	0.575	0.0012	0.252	0.00020	0.0242	0.00019	0.039	0.000094
233'45-PentaCB-(106)	ng/g	-	-	nd	0.00023	nd	0.0038	nd	0.0011	nd	0.00019	nd	0.00018	nd	0.000087
233'4'5-PentaCB-(107)	ng/g	-	-	0.073	0.00022	0.17	0.0034	0.218	0.00095	0.144	0.00018	0.0123	0.00016	0.008	0.000077
PentaCB-(108)+(124)	ng/g	-	-	0.032	0.00023	0.06	0.0037	0.09	0.0010	0.035	0.00019	0.002	0.00017	0.003	0.000083
PentaCB-(110)+(115)	ng/g	-	-	1.18	0.00016	2.68	0.0022	4.29	0.0011	1.28	0.00019	0.096	0.00030	0.118	0.00011
233'55'-PentaCB-(111)	ng/g	-	-	nd	0.00017	nd	0.0030	0.006	0.0011	0.004	0.00020	nd	0.00064	nd	0.00012
233'56-PentaCB-(112)	ng/g	-	-	nd	0.00017	nd	0.0023	nd	0.0012	nd	0.00021	nd	0.00032	nd	0.00012
2344'5-PentaCB-(114)	ng/g	-	-	0.014	0.00024	0.02	0.0039	0.030	0.0011	0.010	0.00020	nd	0.00078	nd	0.0015
23'44'5-PentaCB-(118)	ng/g	-	-	1.06	0.00024	2.11	0.0038	2.59	0.0011	1.04	0.00019	0.0933	0.00018	0.113	0.000091
23'455'-PentaCB-(120)	ng/g	-	-	0.006	0.00016	0.03	0.0022	0.041	0.0011	0.023	0.00019	0.0031	0.00030	0.001	0.00011
23'45'6-PentaCB-(121)	ng/g	-	-	nd	0.00016	nd	0.0022	nd	0.0011	nd	0.00020	nd	0.00031	nd	0.00012
233'4'5'-PentaCB-(122)	ng/g	-	-	0.008	0.00025	0.01	0.0041	0.014	0.0011	0.005	0.00021	nd	0.00019	nd	0.00060
23'44'5'-PentaCB-(123)	ng/g	-	-	0.008	0.00024	0.01	0.0040	0.009	0.0012	nd	0.00020	0.0005	0.00019	nd	0.000094
33'44'5-PentaCB-(126)	ng/g	-	-	0.028	0.00024	0.15	0.0039	0.288	0.0011	0.114	0.00020	0.0018	0.00018	0.003	0.000093
33'455'-PentaCB-(127)	ng/g	-	-	nd	0.00023	nd	0.0047	0.008	0.0010	nd	0.0018	nd	0.00017	nd	0.000083
HexaCB-(128)+(166)	ng/g	-	-	0.622	0.0011	2.28	0.012	4.19	0.0047	1.37	0.0011	0.040	0.00046	0.059	0.00042
HexaCB-(129)+(138)+(163)	ng/g	-	-	6.13	0.0010	29.2	0.012	54.5	0.0047	16.6	0.0011	0.422	0.00045	0.627	0.00042
22'33'45'-HexaCB-(130)	ng/g	-	-	0.264	0.0013	1.11	0.015	2.15	0.0060	0.700	0.0014	0.0256	0.00058	0.029	0.00053
22'33'46-HexaCB-(131)	ng/g	-	-	0.037	0.0013	0.13	0.014	0.249	0.0057	0.083	0.0014	0.0028	0.00055	nd	0.0027
22'33'46'-HexaCB-(132)	ng/g	-	-	1.63	0.0013	7.51	0.015	14.8	0.0058	3.88	0.0014	0.106	0.00057	0.145	0.00051
22'33'55'-HexaCB-(133)	ng/g	-	-	0.068	0.0012	0.34	0.013	0.666	0.0053	0.205	0.0013	nd	0.00051	0.008	0.00047
HexaCB-(134)+(143)	ng/g	-	-	0.197	0.0013	0.86	0.014	1.69	0.0057	0.458	0.0014	0.013	0.00055	0.019	0.00050
HexaCB-(135)+(151)	ng/g	-	-	2.13	0.00022	10.8	0.0093	25.6	0.0010	6.08	0.00012	0.167	0.00047	0.187	0.00016
22'33'66'-HexaCB-(136)	ng/g	-	-	0.550	0.00015	2.89	0.0066	6.81	0.00075	1.59	0.000084	0.0399	0.00033	0.055	0.00011
22'344'5-HexaCB-(137)	ng/g	-	-	0.045	0.0012	0.09	0.013	0.122	0.0052	nd	0.0013	0.0027	0.00052	0.005	0.00046
HexaCB-(139)+(140)	ng/g	-	-	0.030	0.0011	0.10	0.012	0.18	0.0050	0.073	0.0012	0.007	0.00048	0.004	0.00044
22'3455'-HexaCB-(141)	ng/g	-	-	0.926	0.0011	3.54	0.013	11.5	0.0054	1.62	0.0012	0.0303	0.00049	0.063	0.00048
22'3456-HexaCB-(142)	ng/g	-	-	nd	0.0013	nd	0.015	nd	0.0058	nd	0.0014	nd	0.00057	nd	0.00051
22'345'6-HexaCB-(144)	ng/g	-	-	0.31	0.00021	1.12	0.0089	3.24	0.0011	0.905	0.00012	0.0156	0.00045	0.025	0.00016
22'3466'-HexaCB-(145)	ng/g	-	-	nd	0.00027	nd	0.0070	nd	0.00079	nd	0.000093	nd	0.00035	nd	0.00012
22'34'55'-HexaCB-(146)	ng/g	-	-	0.889	0.0011	4.75	0.012	9.27	0.0049	2.82	0.0011	0.117	0.00048	0.097	0.00044
HexaCB-(147)+(149)	ng/g	-	-	4.58	0.0011	23.2	0.012	50.7	0.0049	12.8	0.0012	0.332	0.00048	0.417	0.00044
22'34'56'-HexaCB-(148)	ng/g	-	-	0.004	0.00021	0.02	0.0088	0.036	0.0010	0.014	0.00012	0.0023	0.00044	nd	0.00043
22'34'66'-HexaCB-(150)	ng/g	-	-	0.005	0.00016	0.04	0.0063	0.058	0.00072	0.021	0.000086	0.0006	0.00032	nd	0.00040
22'3566'-HexaCB-(152)	ng/g	-	-	0.001	0.00014	nd	0.0063	nd	0.00073	nd	0.00091	nd	0.00031	0.00	0.00011
HexaCB-(153)+(168)	ng/g	-	-	6.05	0.00095	30.9	0.010	60.3	0.0041	20.0	0.0032	0.518	0.00040	0.618	0.00036
22'44'56'-HexaCB-(154)	ng/g	-	-	0.034	0.00019	0.18	0.0078	0.319	0.00086	0.145	0.00010	0.0116	0.00039	0.005	0.00013
22'44'66'-HexaCB-(155)	ng/g	-	-	nd	0.00017	nd	0.0057	nd	0.00055	nd	0.000072	nd	0.00029	nd	0.000084
HexaCB-(156)+(157)	ng/g	-	-	0.336	0.00037	1.05	0.012	2.09	0.0030	0.655	0.00062	0.015	0.00034	0.024	0.00019
233'44'6-HexaCB-(158)	ng/g	-	-	0.469	0.00083	1.97	0.0092	3.72	0.0037	1.20	0.00088	0.0257	0.00036	0.035	0.00033
233'455'-HexaCB-(159)	ng/g	-	-	0.083	0.00037	0.46	0.012	0.744	0.0027	0.223	0.00061	0.0046	0.00034	0.006	0.00017
233'456-HexaCB-(160)	ng/g	-	-	nd	0.00098	nd	0.011	nd	0.0041	nd	0.0010	nd	0.00043	nd	0.00037
233'45'6-HexaCB-(161)	ng/g	-	-	nd	0.00090	nd	0.0096	nd	0.0039	nd	0.00095	nd	0.00037	nd	0.00034
233'4'55'-HexaCB-(162)	ng/g	-	-	0.014	0.00038	0.05	0.012	0.132	0.0028	0.042	0.00063	0.0016	0.00035	0.001	0.00018
233'4'5'6-HexaCB-(164)	ng/g	-	-	0.396	0.00091	1.76	0.010	3.87	0.0042	0.963	0.00097	0.0205	0.00040	0.035	0.00037
233'55'6-HexaCB-(165)	ng/g	-	-	nd	0.00097	0.08	0.011	nd	0.0043	nd	0.0010	0.0029	0.00042	nd	0.00038
23'44'55'-HexaCB-(167)	ng/g	-	-	0.179	0.00037	0.73	0.011	1.52	0.0029	0.469	0.00061	0.0108	0.00033	0.016	0.00018

Table C.3 Results of Laboratory Analysis of PCB Congeners in Sediment - Grab Sampling, Hopedale Harbour (cont.)
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Parameter	Units	Criteria[1]	Criteria[2]	11-SED3	EDL	11-SED7	EDL	11-SED14	EDL	11-SED20	EDL	11-SED32	EDL	11-SED39	EDL
33'44'55'-HexaCB-(169)	ng/g	-	-	0.011	0.00038	0.05	0.012	0.103	0.0030	0.039	0.00062	0.0007	0.00034	0.001	0.00019
22'33'44'5-HeptaCB-(170)	ng/g	-	-	2.97	0.00033	14.2	0.0091	27.3	0.0029	8.21	0.00086	0.138	0.00037	0.172	0.00021
HeptaCB-(171)+(173)	ng/g	-	-	0.922	0.00040	4.48	0.011	7.74	0.0035	2.62	0.0010	0.048	0.00045	0.057	0.00025
22'33'455'-HeptaCB-(172)	ng/g	-	-	0.508	0.00042	2.34	0.011	4.80	0.0036	1.31	0.0011	0.0218	0.00046	0.026	0.00027
22'33'456'-HeptaCB-(174)	ng/g	-	-	2.84	0.00038	15.0	0.011	27.7	0.0034	6.95	0.00097	0.141	0.00044	0.200	0.00025
22'33'45'6-HeptaCB-(175)	ng/g	-	-	0.117	0.00022	0.61	0.0076	1.13	0.00042	0.341	0.000090	0.0082	0.00035	0.008	0.00011
22'33'466'-HeptaCB-(176)	ng/g	-	-	0.341	0.00017	1.76	0.0056	3.33	0.00031	1.01	0.000067	0.0199	0.00026	0.025	0.000083
22'33'45'6'-HeptaCB-(177)	ng/g	-	-	2.09	0.00039	10.7	0.011	17.8	0.0035	5.93	0.0010	0.121	0.00044	0.200	0.00026
22'33'55'6-HeptaCB-(178)	ng/g	-	-	0.635	0.00023	3.42	0.0077	5.86	0.00043	1.94	0.000091	0.0463	0.00035	0.057	0.00012
22'33'566'-HeptaCB-(179)	ng/g	-	-	1.00	0.00016	5.67	0.0054	11.1	0.00030	3.30	0.000065	0.0659	0.00025	0.095	0.000082
HeptaCB-(180)+(193)	ng/g	-	-	5.63	0.00030	23.1	0.0080	53.4	0.0026	15.5	0.0014	0.265	0.00033	0.332	0.00019
22'344'56-HeptaCB-(181)	ng/g	-	-	0.006	0.00038	0.02	0.010	0.042	0.0033	0.012	0.00098	nd	0.00042	nd	0.00024
22'344'56'-HeptaCB-(182)	ng/g	-	-	0.008	0.00024	0.03	0.0079	0.073	0.00043	0.027	0.000095	nd	0.00036	nd	0.00012
22'344'5'6-HeptaCB-(183)	ng/g	-	-	1.68	0.00035	7.95	0.0093	15.1	0.0030	4.63	0.00089	0.0949	0.00038	0.113	0.00022
22'344'66'-HeptaCB-(184)	ng/g	-	-	nd	0.0026	0.01	0.0054	0.014	0.00029	0.006	0.000065	nd	0.00025	nd	0.000066
22'3455'6-HeptaCB-(185)	ng/g	-	-	0.158	0.00038	0.80	0.010	1.61	0.0034	0.366	0.00097	nd	0.00043	nd	0.00025
22'34566'-HeptaCB-(186)	ng/g	-	-	nd	0.00017	nd	0.0058	nd	0.00032	nd	0.000067	nd	0.00026	nd	0.000088
22'34'55'6-HeptaCB-(187)	ng/g	-	-	3.91	0.00022	21.7	0.0074	35.7	0.00040	12.1	0.000089	0.266	0.00034	0.362	0.00011
22'34'566'-HeptaCB-(188)	ng/g	-	-	0.003	0.00018	0.02	0.0062	0.033	0.00032	0.013	0.000072	0.0005	0.00028	nd	0.00036
233'44'55'-HeptaCB-(189)	ng/g	-	-	0.088	0.00038	0.42	0.0097	0.793	0.0024	0.256	0.00094	0.0041	0.00041	0.005	0.00017
233'44'56-HeptaCB-(190)	ng/g	-	-	0.534	0.00031	2.70	0.0083	4.58	0.0026	1.39	0.00080	0.0170	0.00034	0.037	0.00019
233'44'5'6-HeptaCB-(191)	ng/g	-	-	0.099	0.00031	0.46	0.0082	0.849	0.0026	0.263	0.00079	0.0053	0.00033	0.005	0.00019
233'455'6-HeptaCB-(192)	ng/g	-	-	nd	0.00033	nd	0.0090	nd	0.0029	nd	0.00085	nd	0.00037	nd	0.00021
22'33'44'55'-OctaCB-(194)	ng/g	-	-	1.38	0.00036	7.18	0.0060	13.1	0.0013	4.49	0.00095	0.0671	0.00029	0.073	0.00022
22'33'44'56-OctaCB-(195)	ng/g	-	-	0.601	0.00038	3.04	0.0063	5.15	0.0014	1.95	0.0010	0.0265	0.00031	0.041	0.00024
22'33'44'56'-OctaCB-(196)	ng/g	-	-	0.740	0.00028	3.57	0.0067	6.81	0.0013	2.23	0.00023	0.0382	0.00055	0.046	0.00014
22'33'44'66'OctaCB-(197)	ng/g	-	-	0.047	0.00020	0.21	0.0046	0.494	0.00094	nd	0.14	0.0032	0.00038	0.004	0.00010
OctaCB-(198)+(199)	ng/g	-	-	1.66	0.00029	8.15	0.0068	13.9	0.0013	4.86	0.00024	0.090	0.00056	0.130	0.00014
22'33'4566'-OctaCB-(200)	ng/g	-	-	0.179	0.00021	0.88	0.0051	1.34	0.00085	0.484	0.00017	0.0084	0.00041	0.012	0.000093
22'33'45'66'-OctaCB-(201)	ng/g	-	-	0.190	0.00020	0.86	0.0047	1.64	0.00087	0.577	0.00016	0.0108	0.00038	0.015	0.000096
22'33'55'66'-OctaCB-(202)	ng/g	-	-	0.267	0.00024	1.35	0.0057	2.30	0.0010	0.880	0.00019	0.0182	0.00047	0.026	0.00011
22'344'55'6-OctaCB-(203)	ng/g	-	-	0.834	0.00027	4.14	0.0064	7.32	0.0012	2.51	0.00023	0.0344	0.00052	0.061	0.00013
22'344'566'-OctaCB-(204)	ng/g	-	-	nd	0.00017	nd	0.0048	nd	0.00087	0.001	0.00016	nd	0.00039	nd	0.000096
233'44'55'6-OctaCB-(205)	ng/g	-	-	0.060	0.00026	0.31	0.0045	0.560	0.0010	0.188	0.00069	0.0031	0.00022	0.005	0.00018
22'33'44'55'6-NonaCB-(206)	ng/g	-	-	0.239	0.00031	1.13	0.0050	2.03	0.0018	0.657	0.00030	0.0172	0.00039	0.028	0.00049
22'33'44'566'-NonaCB-(207)	ng/g	-	-	0.033	0.00028	0.16	0.0046	0.287	0.0016	0.096	0.00027	0.0024	0.00036	0.005	0.00044
22'33'455'66'-NonaCB-(208)	ng/g	-	-	0.047	0.00031	0.22	0.0050	0.324	0.0018	0.116	0.00030	0.0042	0.00039	0.009	0.00049
DecaCB-(209)	ng/g	-	-	0.066	0.00025	0.18	0.0044	nd	0.038	0.064	0.00014	0.0092	0.00034	0.056	0.00016
Total PCB	ng/g	21.5	189	**63.9**	-	**290**	-	**560**	-	**168**	-	4.38	-	5.59	-

Notes:
1 = Canadian Council of Ministers of the Environment (CCME) Interim Sediment Quality Guidelines (ISQGs) for marine sediment (2002)
2 = Canadian Council of Ministers of the Environment (CCME) Probable Effects Level (PEL) for marine sediment (2002)
EDL = Estimated Detection Limit
nd = Not detected above EDL
Bold = Value exceeds CCME ISQG
Shaded/ Bold = Value exceeds CCME ISQG and CCME PEL

Table C.4 Results of Laboratory Analysis of PCBs in Sediment - Core Sampling, Hopedale Harbour
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Sample Description	Sample ID	Sample Depth (cm)	Polychlorinated Biphenyls (PCBs)	Comments	Sample ID	Sample Depth (cm)	Lead 210 (Bq/kg)
RDL	**-**	**-**	0.01	-	**-**	**-**	-
Units	**-**	**-**	mg/kg	-	**-**	**-**	-
Criteria[1]	**-**	**-**	0.0215	-	**-**	**-**	-
Criteria[2]	**-**	**-**	0.189	-	**-**	**-**	-
2011 Sampling - Stantec							
Olive green silt	**C1-A-01**	0.0 - 1.2	**0.92**	Aroclor 1260	**-**	-	**-**
Black silt	**C1-A-02**	1.2 - 2.3	**1.6**	Aroclor 1260	**-**	-	**-**
	C1-A-03	2.3 - 3.5	**1.2**	Aroclor 1260	**-**	-	**-**
	C1-A-04	3.5 - 4.6	**1.2**	Aroclor 1260	**-**	-	**-**
	C1-A-05	4.6 - 5.8	**1.4**	Aroclor 1260	**-**	-	**-**
Grey silt	**C1-A-06**	5.8 - 7.0	**1.6**	Aroclor 1260	**-**	-	**-**
	C1-A-07	7.0 - 8.2	**1.5**	Aroclor 1260	**-**	-	**-**
	C1-A-08	8.2 - 9.3	**2.0**	Aroclor 1260	**-**	-	**-**
	C1-A-09	9.3 - 10.5	**3.1**	Aroclor 1260	**-**	-	**-**
	C1-A-10	10.5 - 11.7	**3.3**	Aroclor 1260	**-**	-	**-**
	C1-A-10 Lab-Dup	10.5 - 11.7	**2.8**	-	**-**	-	**-**
	C1-A-11	11.7 - 12.8	**2.8**	Aroclor 1260	**-**	-	**-**
	C1-A-12	12.8 - 14.0	**1.9**	Aroclor 1260	**-**	-	**-**
Olive green silt	**C2-A-01**	0.0 - 1.3	**0.14**	Aroclor 1260	**C2-B-01**	0.0 - 1.3	89.98
Grey to black silt	**C2-A-02**	1.3 - 2.5	**0.21**	Aroclor 1260	**C2-B-02**	1.3 - 2.6	130.35
	C2-A-03	2.5 - 3.8	**0.23**	Aroclor 1260	**C2-B-03**	2.6 - 3.9	87.16
	C2-A-04	3.8 - 5.0	**0.21**	Aroclor 1260	**C2-B-04**	3.9 - 5.2	48.93
	C2-A-05	5.0 - 6.3	**0.17**	Aroclor 1260	**C2-B-05**	5.2 - 6.5	54.88
	C2-A-06	6.3 - 7.6	**0.14**	Aroclor 1260	**C2-B-06**	6.5 - 7.8	41.8
	C2-A-07	7.6 - 8.8	**0.14**	Aroclor 1260	**C2-B-07**	7.8 - 9.1	-
	C2-A-08	8.8 - 10.1	**0.11**	Aroclor 1260	**C2-B-08**	9.1 - 10.4	19.25
Grey silty clay	**C2-A-09**	10.1 - 11.3	nd	-	**C2-B-09**	10.4 - 11.7	1.38
	C2-A-10	11.3 - 12.6	**0.04**	Aroclor 1260	**C2-B-10**	11.7 - 13.0	0.75
	C2-A-10 Lab-Dup	11.3 - 12.6	0.02	-	-	-	-
	C2-A-11	12.6 - 13.9	nd	-	**C2-B-11**	13.0 - 14.3	5.36
	C2-A-12	13.9 - 15.1	nd	-	**C2-B-12**	14.3 - 15.6	10.31
	C2-A-13	15.1 - 16.4	nd	-	**C2-B-13**	15.6 - 16.9	
	C2-A-14	16.4 - 17.7	nd	-	**C2-B-14**	16.9 - 18.2	10.06
	C2-A-15	17.7 - 18.9	nd	-	**C2-B-15**	18.2 - 19.5	-
	C2-A-16	18.9 - 20.2	nd	-	-	-	-
	C2-A-17	20.2 - 21.4	nd	-	**C2-B-16**	19.5 - 20.8	9.08
	C2-A-18	21.4 - 22.7	nd	-	**C2-B-17**	20.8 - 22.1	5.99
	C2-A-19	22.7 - 24.0	nd	-	**C2-B-18**	22.1 - 23.4	4.16
	C2-A-20	24.0 - 25.2	nd	-	**C2-B-19**	23.4 - 24.7	6.39
	C2-A-21	25.2 - 26.5	nd	-	**C2-B-20**	24.7- 26.0	18.01
	C2-A-22	26.5 - 27.7	nd	-	-	-	-
	C2-A-23	27.7 - 29.0	nd	-	-	-	-
Olive green silt	**C3-A-01**	0.0 - 1.2	**0.26**	Aroclor 1260	**-**	-	-
	C3-A-02	1.2 - 2.4	**0.28**	Aroclor 1260	**-**	-	-
	C3-A-03	2.4 - 3.6	**0.23**	Aroclor 1260	**-**	-	-
Grey to black silt	**C3-A-04**	3.6 - 4.8	**0.22**	Aroclor 1260	**-**	-	-
	C3-A-05	4.8 - 6.0	**0.27**	Aroclor 1260	**-**	-	-
	C3-A-06	6.0 - 7.2	**0.27**	Aroclor 1260	**-**	-	-
	C3-A-07	7.2 - 8.4	**0.15**	Aroclor 1260	**-**	-	-
	C3-A-08	8.4 - 9.6	**0.07**	Aroclor 1260	**-**	-	-
	C3-A-09	9.6 - 10.8	**0.10**	Aroclor 1260	**-**	-	-
Grey silt	**C3-A-10**	10.8 - 12.0	**0.03**	Aroclor 1260	**-**	-	-
	C3-A-11	12.0 - 13.2	nd	-	**-**	-	-
	C3-A-12	13.2 - 14.4	nd	-	**-**	-	-
	C3-A-12 Lab-Dup	13.2 - 14.4	nd	-	**-**	-	-
	C3-A-13	14.4 - 15.6	nd	-	**-**	-	-
	C3-A-14	15.6 - 16.8	nd	-	**-**	-	-
	C3-A-15	16.8 - 18.0	nd	-	**-**	-	-
	C3-A-16	18.0 - 19.2	nd	-	**-**	-	-
	C3-A-17	19.2 - 20.4	nd	-	**-**	-	-
	C3-A-18	20.4 - 21.6	nd	-	**-**	-	-
	C3-A-19	21.6 - 22.8	nd	-	**-**	-	-
	C3-A-20	22.8 - 24.0	nd	-	**-**	-	-

Table C.4 Results of Laboratory Analysis of PCBs in Sediment - Core Sampling, Hopedale Harbour
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Sample Description	Sample ID	Sample Depth (cm)	Polychlorinated Biphenyls (PCBs)	Comments	Sample ID	Sample Depth (cm)	Lead 210 (Bq/kg)
RDL	**-**	**-**	0.01	-	**-**	**-**	-
Units	**-**	**-**	mg/kg	-	**-**	**-**	-
Criteria[1]	**-**	**-**	0.0215	-	**-**	**-**	-
Criteria[2]	**-**	**-**	0.189	-	**-**	**-**	-
Olive green silt	**C4-A-01**	0.0 - 1.2	**0.15**	Aroclor 1260	**-**	-	-
Grey to black silt	**C4-A-02**	1.2 - 2.4	**0.25**	Aroclor 1260	**-**	-	-
	C4-A-03	2.4 - 3.6	**3.6**	Aroclor 1260	**-**	-	-
	C4-A-03 Lab-Dup	2.4 - 3.6	**2.8**	Aroclor 1260	**-**	-	-
	C4-A-04	3.6 - 4.8	**0.35**	Aroclor 1260	**-**	-	-
	C4-A-05	4.8 - 6.0	**0.34**	Aroclor 1260	**-**	-	-
	C4-A-06	6.0 - 7.1	**0.55**	Aroclor 1260	**-**	-	-
	C4-A-07	7.1 - 8.3	**0.45**	Aroclor 1260	**-**	-	-
	C4-A-08	8.3 - 9.5	**4.0**	Aroclor 1260	**-**	-	-
	C4-A-09	9.5 - 10.7	**4.4**	Aroclor 1260	**-**	-	-
	C4-A-10	10.7 - 11.9	**2.8**	Aroclor 1260	**-**	-	-
	C4-A-11	11.9 - 13.1	**2.5**	Aroclor 1260	**-**	-	-
	C4-A-12	13.1 - 14.3	**3.0**	Aroclor 1260	**-**	-	-
	C4-A-13	14.3 - 15.5	**0.20**	Aroclor 1260	**-**	-	-
Grey silt	**C4-A-14**	15.5 - 16.7	**0.09**	Aroclor 1260	**-**	-	-
	C4-A-15	16.7 - 17.9	nd	-	**-**	-	-
	C4-A-16	17.9 - 19.0	nd	-	**-**	-	-
	C4-A-17	19.0 - 20.2	nd	-	**-**	-	-
	C4-A-18	20.2 - 21.4	nd	-	**-**	-	-
	C4-A-19	21.4 - 22.6	nd	-	**-**	-	-
	C4-A-20	22.6 - 23.8	nd	-	**-**	-	-
	C4-A-21	23.8 - 25.0	nd	-	**-**	-	-
Olive green silt	**C5-A-01**	0.0 - 1.3	**3.0**	Aroclor 1260	**C5-B-01**	0.0 - 1.3	101.0
Grey to black silt	**C5-A-02**	1.3 - 2.5	**2.8**	Aroclor 1260	**C5-B-02**	1.3 - 2.5	92.76
	C5-A-03	2.5 - 3.8	**2.5**	Aroclor 1260	**C5-B-03**	2.5 - 3.8	82.88
	C5-A-04	3.8 - 5.1	**2.7**	Aroclor 1260	**C5-B-04**	3.8 - 5.0	82.49
	C5-A-05	5.1 - 6.4	**2.9**	Aroclor 1260	**C5-B-05**	5.0 - 6.3	82.05
	C5-A-06	6.4 - 7.6	**3.1**	Aroclor 1260	**C5-B-06**	6.3 - 7.6	-
Grey silt	**C5-A-07**	7.6 - 8.9	**3.5**	Aroclor 1260	**C5-B-07**	7.6 - 8.8	48.57
	C5-A-08	8.9 - 10.2	**3.4**	Aroclor 1260	**C5-B-08**	8.8 - 10.1	-
	C5-A-09	10.1 - 11.5	**3.3**	Aroclor 1260	**C5-B-09**	10.1 - 11.3	29.01
	C5-A-10	11.5 - 12.7	**2.7**	Aroclor 1260	**C5-B-10**	11.3 - 12.6	26.35
	C5-A-10 Lab-Dup	11.5 - 12.7	**3.3**	Aroclor 1260	-	-	-
	C5-A-11	12.7 - 14.0	**3.2**	Aroclor 1260	**C5-B-11**	12.6 - 13.9	12.15
	C5-A-12	14.0 - 15.3	**2.8**	Aroclor 1260	**C5-B-12**	13.9 - 15.1	-
	C5-A-13	15.3 - 16.5	**0.83**	Aroclor 1260	**C5-B-13**	15.1 - 16.4	0.14
	C5-A-14	16.5 - 17.8	**0.48**	Aroclor 1260	**C5-B-14**	16.4 - 17.7	-
	C5-A-15	17.8 - 19.1	**0.42**	Aroclor 1260	**C5-B-15**	17.7 - 18.9	37.02
	C5-A-16	19.1 - 20.4	**0.68**	Aroclor 1260	**C5-B-16**	18.9 - 20.2	7.9
	C5-A-17	20.4 - 21.6	**0.18**	Aroclor 1260	**C5-B-17**	20.2 - 21.4	12.18
	C5-A-18	21.6- 22.9	**0.11**	Aroclor 1260	**C5-B-18**	21.4 - 22.7	-
	C5-A-19	22.9 - 24.2	nd	-	**C5-B-19**	22.7 - 24.0	5.05
	C5-A-20	24.2 - 25.5	nd	-	**C5-B-20**	24.0 - 25.2	4.52
	C5-A-21	25.5 - 26.7	nd	-	**C5-B-21**	25.2 - 26.5	2.78
	C5-A-22	26.7 - 28.0	nd	-	**C5-B-22**	26.5 - 27.7	5.73
	-	-	-	-	**C5-B-23**	27.7 - 29.0	7.14

Notes:
1 = Canadian Council of Ministers of the Environment (CCME) Interim Sediment Quality Guidelines (ISQGs) for marine sediment (2002)
2 = Canadian Council of Ministers of the Environment (CCME) Probable Effects Level (PEL) for marine sediment (2002)
RDL = Reportable Detection Limit for routine analysis
nd = Not detected above standard RDL
Lab-Dup = Laboratory duplicate sample
Bold = Value exceeds CCME ISQG
Shaded/ Bold = Value exceeds CCME ISQG and CCME PEL

Table C.5 Results of Laboratory Analysis of PCBs in Fish
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Sample ID	Species	Crude Fat	Polychlorinated Biphenyls (PCBs)	Comment
RDL		0.5	0.05	-
Units		%	mg/kg	-
Inner Harbour				
2010 Sampling - Stantec				
AREA 2 FISH 1	Shorthorn sculpin	2.5	nd	-
AREA 3 FISH 1	Shorthorn sculpin	nd	nd	-
AREA 3 FISH 14	Shorthorn sculpin	0.7	nd	-
AREA 3 FISH 15	Shorthorn sculpin	5.2	0.08	Aroclor 1260
AREA 3 FISH 16	Shorthorn sculpin	0.6	0.46	Aroclor 1260
AREA 3 FISH 17	Shorthorn sculpin	0.7	nd	-
AREA 4 FISH 5	Shorthorn sculpin	0.8	0.05	Aroclor 1260
AREA 2 FISH 4	Rock cod	1.5	1.6	Aroclor 1260
AREA 2 FISH 4 Lab-Dup	Rock cod	-	1.9	-
AREA 2 FISH 5	Rock cod	2.1	1	Aroclor 1260
AREA 2 FISH 6	Rock cod	1	1.4	Aroclor 1260
AREA 2 FISH 7	Rock cod	1.6	0.81	Aroclor 1260
AREA 2 FISH 8	Rock cod	2.3	0.92	Aroclor 1260
AREA 2 FISH 9	Rock cod	1.4	2.1	Aroclor 1260
AREA 2 FISH 10	Rock cod	1.6	0.09	Aroclor 1260
AREA 2 FISH 11	Rock cod	3.3	0.11	Aroclor 1260
AREA 2 FISH 12	Rock cod	1.3	1.5	Aroclor 1260
AREA 2 FISH 13	Rock cod	2.7	2.9	Aroclor 1260
AREA 3 FISH 8	Rock cod	nd	0.29	Aroclor 1260
AREA 3 FISH 8 Lab-Dup	Rock cod	nd	-	-
AREA 3 FISH 9	Rock cod	0.6	0.48	Aroclor 1260
AREA 3 FISH 10	Rock cod	0.8	1.7	Aroclor 1260
AREA 3 FISH 11	Rock cod	nd	0.22	Aroclor 1260
AREA 3 FISH 12	Rock cod	0.6	0.4 (0.3)	Aroclor 1260
AREA 3 FISH 13	Rock cod	0.5	0.16	Aroclor 1260
AREA 3 FISH 13 Lab-Dup	Rock cod	-	0.21	-
AREA 4 FISH 1	Rock cod	2.3	0.27	Aroclor 1260
AREA 4 FISH 2	Rock cod	0.7	nd	-
AREA 4 FISH 3	Rock cod	2.7	1.5	Aroclor 1260
2011 Sampling - Stantec				
11-SCULPIN-IH1	Sculpin	1.8	nd	-
11-SCULPIN-IH2	Sculpin	0.6	0.23	Aroclor 1260
11-SCULPIN-IH3	Sculpin	1.4	0.25	Aroclor 1260
11-SCULPIN-IH4	Sculpin	1.9	0.77	Aroclor 1260
11-SCULPIN-IH5	Sculpin	2.1	0.99	Aroclor 1260
11-SCULPIN-IH6	Sculpin	1.6	0.67	Aroclor 1260
11-SCULPIN-IH7	Sculpin	0.7	0.05	Aroclor 1260
11-SCULPIN-IH8	Sculpin	0.9	0.82	Aroclor 1260
11-SCULPIN-IH9	Sculpin	1.4	nd	-
11-SCULPIN-IH10	Sculpin	0.8	0.44	Aroclor 1260
11-SCULPIN LIVER-IH1	Sculpin	12	8.1	Aroclor 1260
11-SCULPIN LIVER-IH2	Sculpin	ins.	3.3	Aroclor 1260
11-SCULPIN LIVER-IH3	Sculpin	15	3.7	Aroclor 1260
11-ROCKCOD-IH1	Rock cod	1.1	nd	-
11-ROCKCOD-IH2	Rock cod	nd	0.10	Aroclor 1260
11-ROCKCOD-IH3	Rock cod	0.5	0.32	Aroclor 1260
11-ROCKCOD-IH4	Rock cod	0.6	0.72	Aroclor 1260
11-ROCKCOD-IH5	Rock cod	0.5	0.10	Aroclor 1260
11-ROCKCOD-IH6	Rock cod	0.7	0.19	Aroclor 1260
11-ROCKCOD-IH7	Rock cod	nd	0.11	Aroclor 1260
11-ROCKCOD-IH7 Lab-Dup	Rock cod	0.5	-	-
11-ROCKCOD-IH8	Rock cod	nd	0.45	Aroclor 1260
11-ROCKCOD-IH9	Rock cod	nd	0.27	Aroclor 1260
11-ROCKCOD-IH10	Rock cod	0.6	0.37	Aroclor 1260
11-ROCKCOD-IH10 Lab-Dup	Rock cod	-	0.29	-
11-ROCKCOD LIVER-IH1	Rock cod	43	20	Aroclor 1260
11-ROCKCOD LIVER-IH2	Rock cod	37	34	Aroclor 1260
11-ROCKCOD LIVER-IH3	Rock cod	35	26	Aroclor 1260
11-ROCKCOD LIVER-IH3 Lab-Dup	Rock cod	33	26	-

Table C.5 Results of Laboratory Analysis of PCBs in Fish
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Sample ID	Species	Crude Fat	Polychlorinated Biphenyls (PCBs)	Comment
RDL		0.5	0.05	-
Units		%	mg/kg	-
Outer Harbour				
2011 Sampling - Stantec				
11-SCULPIN-0H1	Sculpin	ins.	nd	-
11-SCULPIN-0H2	Sculpin	0.9	nd	-
11-SCULPIN-0H3	Sculpin	ins.	0.08	Aroclor 1260
11-SCULPIN-0H4	Sculpin	ins.	nd	-
11-SCULPIN-0H5	Sculpin	0.7	nd	-
11-SCULPIN-0H6	Sculpin	1.0	nd	-
11-SCULPIN-0H7	Sculpin	0.9	0.05	Aroclor 1260
11-SCULPIN-0H8	Sculpin	0.8	nd	-
11-SCULPIN-0H9	Sculpin	0.5	nd	-
11-SCULPIN-0H10	Sculpin	0.7	0.23	Aroclor 1260
11-SCULPIN LIVER-OH1	Sculpin	9	0.54	Aroclor 1260
11-SCULPIN LIVER-OH2	Sculpin	5.4	0.32	Aroclor 1260
11-SCULPIN LIVER-OH3	Sculpin	7	0.24	Aroclor 1260
11-ROCKCOD-OH1	Rock cod	0.5	0.20	Aroclor 1260
11-ROCKCOD-OH1 Lab-Dup	Rock cod	-	0.21	-
11-ROCKCOD-OH2	Rock cod	0.6	0.15	Aroclor 1260
11-ROCKCOD-OH3	Rock cod	0.7	1.1	Aroclor 1260
11-ROCKCOD-OH4	Rock cod	0.7	0.51	Aroclor 1260
11-ROCKCOD-OH5	Rock cod	nd	0.11	Aroclor 1260
11-ROCKCOD-OH6	Rock cod	0.6	0.88	Aroclor 1260
11-ROCKCOD-OH7	Rock cod	nd	0.06	Aroclor 1260
11-ROCKCOD-OH8	Rock cod	0.7	0.09	Aroclor 1260
11-ROCKCOD-OH9	Rock cod	0.6	nd	-
11-ROCKCOD-OH10	Rock cod	0.8	0.08	Aroclor 1260
11-ROCKCOD LIVER-OH1	Rock cod	22	16	Aroclor 1260
11-ROCKCOD LIVER-OH2	Rock cod	35	21	Aroclor 1260
11-ROCKCOD LIVER-OH3	Rock cod	32	5.8	Aroclor 1260
Black Head Tickle				
2011 Sampling - Stantec				
11-SCULPIN-BHT1	Sculpin	0.6	nd	-
11-SCULPIN-BHT1 Lab-Dup	Sculpin	-	nd	-
11-SCULPIN-BHT2	Sculpin	1.4	nd	-
11-SCULPIN-BHT3	Sculpin	1.2	nd	-
11-SCULPIN-BHT4	Sculpin	0.8	nd	-
11-SCULPIN-BHT5	Sculpin	0.8	nd	-
11-SCULPIN-BHT6	Sculpin	0.9	nd	-
11-SCULPIN-BHT7	Sculpin	0.7	nd	-
11-SCULPIN-BHT8	Sculpin	1.2	nd	-
11-SCULPIN-BHT9	Sculpin	3.9	nd	-
11-SCULPIN-BHT10	Sculpin	1.8	nd	-
11-SCULPIN LIVER-BHT1	Sculpin	11	0.1 (0.1)	Aroclor 1260
11-SCULPIN LIVER-BHT2	Sculpin	17	0.2 (0.1)	-
11-SCULPIN LIVER-BHT3	Sculpin	9	nd (0.1)	-
11-ROCKCOD-BHT2	Rock cod	0.5	nd	-
11-ROCKCOD-BHT2 Lab-Dup	Rock cod	-	nd	-
11-ROCKCOD-BHT3	Rock cod	nd	nd	-
11-ROCKCOD-BHT4	Rock cod	0.5	nd	-
11-ROCKCOD-BHT5	Rock cod	0.6	nd	-
11-ROCKCOD-BHT6	Rock cod	nd	nd	-
11-ROCKCOD-BHT7	Rock cod	nd	nd	-
11-ROCKCOD-BHT8	Rock cod	nd	nd	-
11-ROCKCOD-BHT9	Rock cod	nd	nd	-
11-ROCKCOD-BHT10	Rock cod	0.5	nd	-
11-ROCKCOD LIVER-BHT1	Rock cod	35	0.1 (0.1)	Aroclor 1260
11-ROCKCOD LIVER-BHT2	Rock cod	32	nd (0.1)	-
11-ROCKCOD LIVER-BHT3	Rock cod	29	nd (0.1)	-
11-ROCKCOD LIVER-BHT3 Lab-Dup	Rock cod	35	-	-

Table C.5 Results of Laboratory Analysis of PCBs in Fish
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Sample ID	Species	Crude Fat	Polychlorinated Biphenyls (PCBs)	Comment
RDL		0.5	0.05	-
Units		%	mg/kg	-
Tooktoosner Bay				
2010 Sampling - Stantec				
AREA 1 FISH 1	Shorthorn sculpin	0.9	nd	-
AREA 1 FISH 2	Shorthorn sculpin	1.4	nd	-
AREA 1 FISH 3	Shorthorn sculpin	2.3	nd	-
AREA 1 FISH 3 Lab-Dup	Shorthorn sculpin	1.6	-	-
AREA 1 FISH 4	Shorthorn sculpin	1.7	0.89	Aroclor 1260
AREA 1 FISH 5	Shorthorn sculpin	6	nd	-
AREA 1 FISH 6	Shorthorn sculpin	1.1	nd	-
2011 Sampling - Stantec				
11-SCULPIN-TB1	Sculpin	1.8	nd	-
11-SCULPIN-TB2	Sculpin	0.8	nd	-
11-SCULPIN-TB3	Sculpin	2	nd	-
11-SCULPIN-TB4	Sculpin	0.9	nd	-
11-SCULPIN-TB5	Sculpin	0.8	nd	-
11-SCULPIN-TB6	Sculpin	1	nd	-
11-SCULPIN-TB7	Sculpin	2	nd	-
11-SCULPIN-TB8	Sculpin	nd (1)	nd	-
11-SCULPIN-TB9	Sculpin	1.3	nd	-
11-SCULPIN-TB10	Sculpin	0.7	nd	-
11-SCULPIN LIVER-TB1	Sculpin	8.2	0.1 (0.1)	Aroclor 1260
11-SCULPIN LIVER-TB1 Lab-Dup	Sculpin	-	0.1 (0.1)	-
11-SCULPIN LIVER-TB2	Sculpin	6.1	0.1 (0.1)	Aroclor 1260
11-SCULPIN LIVER-TB3	Sculpin	9	nd (0.1)	Aroclor 1260
11-ROCKCOD-TB1	Rock cod	nd	nd	-
11-ROCKCOD-TB2	Rock cod	1.6	nd	-
11-ROCKCOD-TB2 Lab-Dup	Rock cod	-	nd	-
11-ROCKCOD-TB3	Rock cod	nd	nd	-
11-ROCKCOD-TB4	Rock cod	nd	nd	-
11-ROCKCOD-TB5	Rock cod	1	nd	-
11-ROCKCOD-TB6	Rock cod	0.5	nd	-
11-ROCKCOD-TB7	Rock cod	1.5	nd	-
11-ROCKCOD-TB8	Rock cod	0.5	nd	-
11-ROCKCOD-TB9	Rock cod	nd	nd	-
11-ROCKCOD-TB10	Rock cod	1.1	nd	-
11-ROCKCOD LIVER-TB1	Rock cod	42	0.2 (0.1)	Aroclor 1260
11-ROCKCOD LIVER-TB2	Rock cod	41	0.1 (0.1)	Aroclor 1260
11-ROCKCOD LIVER-TB2 Lab-Dup	Rock cod	40	-	-
11-ROCKCOD LIVER-TB3	Rock cod	39	0.2 (0.1)	Aroclor 1260
11-SALMON-TB1	Atlantic Salmon	19	nd	-
11-SALMON-TB2	Atlantic Salmon	17	nd	-
11-SALMON-TB3	Atlantic Salmon	3.1	nd	-
11-SALMON LIVER-TB1	Atlantic Salmon	8.1	nd	-
11-SALMON LIVER-TB2	Atlantic Salmon	5.6	nd	-
11-SALMON LIVER-TB2 Lab-Dup	Atlantic Salmon	5.6	-	-
11-SALMON LIVER-TB3	Atlantic Salmon	11	nd	-

Notes:
RDL = Reportable Detection Limit
# (#) = Elevated RDL shown in brackets
ins. = Insufficient sample to perform crude fat analysis
Lab-Dup = Laboratory duplicate sample

Table C.6 Results of Laboratory Analysis of PCBs in Shellfish
Marine Study and Human Health Risk Assessment Re-evaluation
Former U.S. Military Site, Hopedale, Labrador
Stantec Project No. 121411777.210

Sample ID	Species	Crude Fat	Polychlorinated Biphenyls (PCBs)	Comments
RDL		0.5	0.05	-
Units		%	mg/kg	-
Southwest Bays Area 1				
2011 Sampling - Stantec				
11-MUSSELS-SBA(I)1	Mussels	1.5	0.23	Aroclor 1260
11-MUSSELS-SBA(I)2	Mussels	1.5	0.21	Aroclor 1260
11-MUSSELS-SBA(I)3	Mussels	1.3	0.25	Aroclor 1260
11-CLAMS-SBA(I)1	Cams	nd	nd	-
11-CLAMS-SBA(I)2	Clams	0.7	0.07	Aroclor 1260
11-CLAMS-SBA(I)2 Lab-Dup	Clams	0.9	-	-
11-CLAMS-SBA(I)3	Clams	0.8	0.05	Aroclor 1260
Southwest Bays Area 2				
2011 Sampling - Stantec				
11-MUSSELS-SBA(II)1	Mussels	2.0	0.12	Aroclor 1260
11-MUSSELS-SBA(II)2	Mussels	1.6	0.16	Aroclor 1260
11-MUSSELS-SBA(II)3	Mussels	2.1	0.12	Aroclor 1260
11-CLAMS-SBA(II)1	Clams	1.1	0.05	Aroclor 1260
11-CLAMS-SBA(II)2	Clams	1.3	0.06	Aroclor 1260
11-CLAMS-SBA(II)3	Clams	1.0	nd	-
Black Head Tickle				
2011 Sampling - Stantec				
11-MUSSELS-BHT1	Mussels	1.9	nd (0.1)	-
Tooktoosner Bay				
2011 Sampling - Stantec				
11-MUSSELS-TB1	Mussels	1.7	nd	-
11-CLAMS-TB1	Clams	1.2	nd (0.01)	-

Notes:
RDL = Reportable Detection Limit
nd = Not detected above standard RDL
nd (#) = Not detected above elevated RDL shown in brackets
Lab-Dup = Laboratory duplicate sample

APPENDIX D

Maxxam Analytics Inc. Reports

Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE BIG LAKE
Your C.O.C. #: ES333511

Attention: Anna Roy
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/10/14

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1F5766
Received: 2011/10/06, 9:16

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Moisture	4	N/A	2011/10/07	ATL SOP 00001 R3	MOE Handbook 1983
PCB/DDT in Soil by GC-ECD	4	2011/10/11	2011/10/13	ATL SOP 00106 R4	Based EPA8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Job #: B1F5766
Report Date: 2011/10/14

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE BIG LAKE
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF SOIL

Maxxam ID		LE1833	LE1834	LE1835	LE1836		
Sampling Date		2011/09/30	2011/09/30	2011/09/30	2011/09/30		
	Units	**11-BL-SED1**	**11-BL-SED2**	**11-BL-SED3**	**11-BL-SED4**	**RDL**	**QC Batch**
Inorganics							
Moisture	%	30	11	15	20	1	2640414

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		LE1833	LE1834	LE1835	LE1836	LE1836		
Sampling Date		2011/09/30	2011/09/30	2011/09/30	2011/09/30	2011/09/30		
	Units	**11-BL-SED1**	**11-BL-SED2**	**11-BL-SED3**	**11-BL-SED4**	**11-BL-SED4 Lab-Dup**	**RDL**	**QC Batch**
PCBs								
Total PCB	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	2642776
Surrogate Recovery (%)								
Decachlorobiphenyl	%	88	90	89	94	87		2642776

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1F5766
Report Date: 2011/10/14

Stantec Consulting Ltd
Client Project #: 121411777.210
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Package 1	8.1°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

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Site Location: HOPEDALE BIG LAKE
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Sampler Initials: AR

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
2642776	Decachlorobiphenyl	2011/10/13	94	70 - 130	92	70 - 130	82	%		
2642776	Total PCB	2011/10/13	100	70 - 130	88	70 - 130	<0.01	mg/kg	NC	50

N/A = Not Applicable
RPD = Relative Percent Difference
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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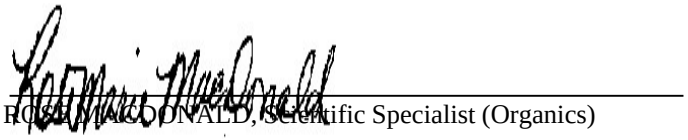
Validation Signature Page

Maxxam Job #: B1F5766

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



ROSA MACDONALD, Scientific Specialist (Organics)

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE BIOTA
Your C.O.C. #: ES363211

Attention: Jim Slade
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2012/03/22
This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1D4909
Received: 2011/09/02, 10:02

Sample Matrix: TISSUE
Samples Received: 125

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Lipids (Crude Fat)	20	2011/09/20	2011/09/13		AOAC 948.16
Lipids (Crude Fat)	20	2011/09/28	2011/09/20		AOAC 948.16
Lipids (Crude Fat)	19	2011/10/03	2011/09/27		AOAC 948.16
Lipids (Crude Fat)	19	2011/10/07	2011/09/30		AOAC 948.16
Lipids (Crude Fat)	18	2011/10/07	2011/10/13		AOAC 948.16
Lipids (Crude Fat)	10	2011/10/11	2011/10/11		AOAC 948.16
Lipids (Crude Fat)	15	2011/10/13	2011/10/13		AOAC 948.16
PCBs in tissue by GC/ECD (1)	15	2011/09/14	2011/09/29	ATL SOP 00110	Based on EPA8082
PCBs in tissue by GC/ECD (1)	1	2011/09/14	2011/10/04	ATL SOP 00110	Based on EPA8082
PCBs in tissue by GC/ECD (1)	4	2011/09/14	2011/10/19	ATL SOP 00110	Based on EPA8082
PCBs in tissue by GC/ECD (1)	19	2011/09/15	2011/10/06	ATL SOP 00110	Based on EPA8082
PCBs in tissue by GC/ECD (1)	1	2011/09/15	2011/10/11	ATL SOP 00110	Based on EPA8082
PCBs in tissue by GC/ECD (1)	17	2011/09/16	2011/10/11	ATL SOP 00110	Based on EPA8082
PCBs in tissue by GC/ECD (1)	3	2011/09/16	2011/10/19	ATL SOP 00110	Based on EPA8082
PCBs in tissue by GC/ECD (1)	20	2011/09/26	2011/10/18	ATL SOP 00110	Based on EPA8082
PCBs in tissue by GC/ECD (1)	19	2011/09/29	2011/10/18	ATL SOP 00110	Based on EPA8082
PCBs in tissue by GC/ECD (1)	20	2011/09/30	2011/10/19	ATL SOP 00110	Based on EPA8082
PCBs in tissue by GC/ECD (1)	6	2011/10/07	2011/10/19	ATL SOP 00110	Based on EPA8082

Remarks:

Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Results are reported on an as received basis unless otherwise indicated.

../2

Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE BIOTA
Your C.O.C. #: ES363211

Attention: Jim Slade
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2012/03/22
This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

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Total cover pages: 2

Maxxam Job #: B1D4909
Report Date: 2012/03/22

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE BIOTA
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4604		KT4609		KT4610		KT4611		
Sampling Date		2011/08/23		2011/08/23		2011/08/23		2011/08/23		
COC Number		ES363211		ES363211		ES363211		ES363211		
	Units	**11-SCULPIN-IH1**	**QC Batch**	**11-SCULPIN-IH2**	**QC Batch**	**11-SCULPIN-IH3**	**QC Batch**	**11-SCULPIN-IH4**	**RDL**	**QC Batch**
Inorganics										
Crude Fat	%	1.8	2642602	0.60	2640536	1.4	2640551	1.9	0.50	2642602

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4612		KT4613	KT4614	KT4615		
Sampling Date		2011/08/23		2011/08/25	2011/08/25	2011/08/25		
COC Number		ES363211		ES363211	ES363211	ES363211		
	Units	**11-SCULPIN-IH5**	**QC Batch**	**11-SCULPIN-IH6**	**11-SCULPIN-IH7**	**11-SCULPIN-IH8**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	2.1	2642602	1.6	0.70	0.90	0.50	2640536

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4616	KT4617		KT4618		KT4619		
Sampling Date		2011/08/25	2011/08/25		2011/08/23		2011/08/24		
COC Number		ES363211	ES363211		ES363211		ES363211		
	Units	**11-SCULPIN-IH9**	**11-SCULPIN-IH10**	**QC Batch**	**11-ROCKCOD-IH1**	**QC Batch**	**11-ROCKCOD-IH2**	**RDL**	**QC Batch**
Inorganics									
Crude Fat	%	1.4	0.80	2642602	1.1	2640551	<0.50	0.50	2640536

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1D4909
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Site Location: HOPEDALE BIOTA
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Sampler Initials: AR

RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4620	KT4621	KT4622	KT4623		
Sampling Date		2011/08/25	2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-IH3**	**11-ROCKCOD-IH4**	**11-ROCKCOD-IH5**	**11-ROCKCOD-IH6**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	0.50	0.60	0.50	0.70	0.50	2640536

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4624	KT4624		KT4625	KT4626		
Sampling Date		2011/08/23	2011/08/23		2011/08/23	2011/08/23		
COC Number		ES363211	ES363211		ES363211	ES363211		
	Units	**11-ROCKCOD-IH7**	**11-ROCKCOD-IH7 Lab-Dup**	**QC Batch**	**11-ROCKCOD-IH8**	**11-ROCKCOD-IH9**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	<0.50	0.50	2642602	<0.50	<0.50	0.50	2640536

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4627		KT4628	KT4630	KT4631		
Sampling Date		2011/08/23		2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211		ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-IH10**	**RDL**	**11-SCULPIN LIVER-IH1**	**11-SCULPIN LIVER-IH3**	**11-ROCKCOD LIVER-IH1**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	0.60	0.50	12	15	43	1.0	2640536

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1D4909
Report Date: 2012/03/22

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE BIOTA
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Sampler Initials: AR

RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4632	KT4632	KT4633		
Sampling Date		2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD LIVER-IH2**	**11-ROCKCOD LIVER-IH2 Lab-Dup**	**11-ROCKCOD LIVER-IH3**	**RDL**	**QC Batch**
Inorganics						
Crude Fat	%	37	33	35	1.0	2640536

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4635	KT4638		KT4639		KT4640		
Sampling Date		2011/08/23	2011/08/23		2011/08/23		2011/08/23		
COC Number		ES363211	ES363211		ES363211		ES363211		
	Units	**11-SCULPIN-0H2**	**11-SCULPIN-0H5**	**RDL**	**11-SCULPIN-0H6**	**RDL**	**11-SCULPIN-0H7**	**RDL**	**QC Batch**
Inorganics									
Crude Fat	%	0.90	0.70	0.50	1.0	0.90	0.90	0.80	2642602

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4641		KT4642	KT4643		
Sampling Date		2011/08/23		2011/08/23	2011/08/23		
COC Number		ES363211		ES363211	ES363211		
	Units	**11-SCULPIN-0H8**	**RDL**	**11-SCULPIN-0H9**	**11-SCULPIN-0H10**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	0.80	0.70	0.50	0.70	0.50	2645863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1D4909
Report Date: 2012/03/22

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE BIOTA
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4644			KT4645		
Sampling Date		2011/08/23			2011/08/23		
COC Number		ES363211			ES363211		
	Units	**11-SCULPIN LIVER-OH1**	**RDL**	**QC Batch**	**11-SCULPIN LIVER-OH2**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	9.0	1.0	2640536	5.4	0.50	2645863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4646			KT4647	KT4648	KT4649		
Sampling Date		2011/08/23			2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211			ES363211	ES363211	ES363211		
	Units	**11-SCULPIN LIVER-OH3**	**RDL**	**QC Batch**	**11-ROCKCOD-OH1**	**11-ROCKCOD-OH2**	**11-ROCKCOD-OH3**	**RDL**	**QC Batch**
Inorganics									
Crude Fat	%	6.8	1.0	2640536	0.50	0.60	0.70	0.50	2629743

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4650	KT4651			KT4652		
Sampling Date		2011/08/23	2011/08/23			2011/08/23		
COC Number		ES363211	ES363211			ES363211		
	Units	**11-ROCKCOD-OH4**	**11-ROCKCOD-OH5**	**RDL**	**QC Batch**	**11-ROCKCOD-OH6**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	0.70	<0.50	0.50	2629743	0.60	0.60	2645863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1D4909
Report Date: 2012/03/22

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE BIOTA
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4653	KT4654	KT4655	KT4656		
Sampling Date		2011/08/23	2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-OH7**	**11-ROCKCOD-OH8**	**11-ROCKCOD-OH9**	**11-ROCKCOD-OH10**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	<0.50	0.70	0.60	0.80	0.50	2629743

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4657	KT4658	KT4659		
Sampling Date		2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD LIVER-OH1**	**11-ROCKCOD LIVER-OH2**	**11-ROCKCOD LIVER-OH3**	**RDL**	**QC Batch**
Inorganics						
Crude Fat	%	22	35	32	0.50	2629743

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4660	KT4661		KT4662	KT4663		
Sampling Date		2011/08/25	2011/08/26		2011/08/26	2011/08/25		
COC Number		ES363211	ES363211		ES363211	ES363211		
	Units	**11-MUSSELS-SBA(I)1**	**11-MUSSELS-SBA(I)2**	**QC Batch**	**11-MUSSELS-SBA(I)3**	**11-CLAMS-SBA(I)1**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	1.5	1.5	2629743	1.3	<0.50	0.50	2645863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1D4909
Report Date: 2012/03/22

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE BIOTA
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4664	KT4664	KT4665		KT4666		
Sampling Date		2011/08/25	2011/08/25	2011/08/25		2011/08/18		
COC Number		ES363211	ES363211	ES363211		ES363211		
	Units	**11-CLAMS-SBA(I)2**	**11-CLAMS-SBA(I)2 Lab-Dup**	**11-CLAMS-SBA(I)3**	**QC Batch**	**11-MUSSELS-SBA(II)1**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	0.70	0.90	0.80	2645863	2.0	0.50	2640551

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4667		KT4668		KT4669		
Sampling Date		2011/08/18		2011/08/18		2011/08/18		
COC Number		ES363211		ES363211		ES363211		
	Units	**11-MUSSELS-SBA(II)2**	**QC Batch**	**11-MUSSELS-SBA(II)3**	**QC Batch**	**11-CLAMS-SBA(II)1**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	1.6	2634443	2.1	2640551	1.1	0.50	2634443

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4670	KT4671	KT4672		KT4673		
Sampling Date		2011/08/18	2011/08/18	2011/08/24		2011/08/24		
COC Number		ES363211	ES363211	ES363211		ES363211		
	Units	**11-CLAMS-SBA(II)2**	**11-CLAMS-SBA(II)3**	**11-SCULPIN-BHT1**	**QC Batch**	**11-SCULPIN-BHT2**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	1.3	1.0	0.60	2634443	1.4	0.50	2640551

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1D4909
Report Date: 2012/03/22

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE BIOTA
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4674		KT4675		KT4676	KT4677		
Sampling Date		2011/08/24		2011/08/24		2011/08/24	2011/08/24		
COC Number		ES363211		ES363211		ES363211	ES363211		
	Units	**11-SCULPIN-BHT3**	**QC Batch**	**11-SCULPIN-BHT4**	**QC Batch**	**11-SCULPIN-BHT5**	**11-SCULPIN-BHT6**	**RDL**	**QC Batch**
Inorganics									
Crude Fat	%	1.2	2634443	0.80	2645863	0.80	0.90	0.50	2634443

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4678			KT4679			KT4680		
Sampling Date		2011/08/24			2011/08/24			2011/08/24		
COC Number		ES363211			ES363211			ES363211		
	Units	**11-SCULPIN-BHT7**	**RDL**	**QC Batch**	**11-SCULPIN-BHT8**	**RDL**	**QC Batch**	**11-SCULPIN-BHT9**	**RDL**	**QC Batch**
Inorganics										
Crude Fat	%	0.70	0.50	2634443	1.2	0.70	2645863	3.9	0.50	2640551

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4681		KT4682			KT4683		
Sampling Date		2011/08/23		2011/08/24			2011/08/24		
COC Number		ES363211		ES363211			ES363211		
	Units	**11-SCULPIN-BHT10**	**QC Batch**	**11-SCULPIN LIVER-BHT1**	**RDL**	**QC Batch**	**11-SCULPIN LIVER-BHT2**	**RDL**	**QC Batch**
Inorganics									
Crude Fat	%	1.8	2640551	11	0.50	2634443	17	1.0	2640551

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4684			KT4685	KT4686		
Sampling Date		2011/08/23			2011/08/21	2011/08/21		
COC Number		ES363211			ES363211	ES363211		
	Units	**11-SCULPIN LIVER-BHT3**	**RDL**	**QC Batch**	**11-ROCKCOD-BHT1**	**11-ROCKCOD-BHT2**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	9.3	1.0	2640551	0.50	0.50	0.50	2619938

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4687	KT4688	KT4689	KT4690		
Sampling Date		2011/08/21	2011/08/21	2011/08/21	2011/08/21		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-BHT3**	**11-ROCKCOD-BHT4**	**11-ROCKCOD-BHT5**	**11-ROCKCOD-BHT6**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	<0.50	0.50	0.60	<0.50	0.50	2619938

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4691	KT4692	KT4693	KT4694		
Sampling Date		2011/08/21	2011/08/21	2011/08/21	2011/08/21		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-BHT7**	**11-ROCKCOD-BHT8**	**11-ROCKCOD-BHT9**	**11-ROCKCOD-BHT10**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	<0.50	<0.50	<0.50	0.50	0.50	2619938

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4695	KT4696		KT4697		
Sampling Date		2011/08/21	2011/08/21		2011/08/21		
COC Number		ES363211	ES363211		ES363211		
	Units	**11-ROCKCOD LIVER-BHT1**	**11-ROCKCOD LIVER-BHT2**	**QC Batch**	**11-ROCKCOD LIVER-BHT3**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	35	32	2619938	29	0.50	2629743

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4697	KT4698	KT4699	KT4700		
Sampling Date		2011/08/21	2011/08/25	2011/08/24	2011/08/24		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD LIVER-BHT3 Lab-Dup**	**11-MUSSELS-BHT1**	**11-SCULPIN-TB1**	**11-SCULPIN-TB2**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	35	1.9	1.8	0.80	0.50	2629743

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4701			KT4702	KT4703		
Sampling Date		2011/08/24			2011/08/24	2011/08/24		
COC Number		ES363211			ES363211	ES363211		
	Units	**11-SCULPIN-TB3**	**RDL**	**QC Batch**	**11-SCULPIN-TB4**	**11-SCULPIN-TB5**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	1.6	1.2	2645863	0.90	0.80	0.50	2629743

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4704	KT4705		KT4706			KT4707		
Sampling Date		2011/08/24	2011/08/24		2011/08/24			2011/08/24		
COC Number		ES363211	ES363211		ES363211			ES363211		
	Units	**11-SCULPIN-TB6**	**11-SCULPIN-TB7**	**QC Batch**	**11-SCULPIN-TB8**	**RDL**	**QC Batch**	**11-SCULPIN-TB9**	**RDL**	**QC Batch**
Inorganics										
Crude Fat	%	1.1	1.5	2645863	<1.0	1.0	2634443	1.3	0.50	2640551

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4708		KT4709	KT4710		
Sampling Date		2011/08/24		2011/08/24	2011/08/24		
COC Number		ES363211		ES363211	ES363211		
	Units	**11-SCULPIN-TB10**	**QC Batch**	**11-SCULPIN LIVER-TB1**	**11-SCULPIN LIVER-TB2**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	0.70	2640551	8.2	6.1	0.50	2634443

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4711			KT4712		KT4713		
Sampling Date		2011/08/26			2011/08/24		2011/08/24		
COC Number		ES363211			ES363211		ES363211		
	Units	**11-SCULPIN LIVER-TB3**	**RDL**	**QC Batch**	**11-ROCKCOD-TB1**	**QC Batch**	**11-ROCKCOD-TB2**	**RDL**	**QC Batch**
Inorganics									
Crude Fat	%	9.3	1.0	2640551	<0.50	2634443	1.6	0.50	2640551

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4714	KT4715		KT4716		KT4717		
Sampling Date		2011/08/24	2011/08/24		2011/08/24		2011/08/24		
COC Number		ES363211	ES363211		ES363211		ES363211		
	Units	**11-ROCKCOD-TB3**	**11-ROCKCOD-TB4**	**QC Batch**	**11-ROCKCOD-TB5**	**QC Batch**	**11-ROCKCOD-TB6**	**RDL**	**QC Batch**
Inorganics									
Crude Fat	%	<0.50	<0.50	2634443	1.0	2640551	0.50	0.50	2634443

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4718		KT4719		KT4720	KT4721		
Sampling Date		2011/08/24		2011/08/24		2011/08/24	2011/08/24		
COC Number		ES363211		ES363211		ES363211	ES363211		
	Units	**11-ROCKCOD-TB7**	**QC Batch**	**11-ROCKCOD-TB8**	**QC Batch**	**11-ROCKCOD-TB9**	**11-ROCKCOD-TB10**	**RDL**	**QC Batch**
Inorganics									
Crude Fat	%	1.5	2640551	0.50	2634443	<0.50	1.1	0.50	2640551

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4722		KT4723	KT4723		
Sampling Date		2011/08/24		2011/08/24	2011/08/24		
COC Number		ES363211		ES363211	ES363211		
	Units	**11-ROCKCOD LIVER-TB1**	**QC Batch**	**11-ROCKCOD LIVER-TB2**	**11-ROCKCOD LIVER-TB2 Lab-Dup**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	42	2634443	41	40	1.0	2640551

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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RESULTS OF ANALYSES OF TISSUE

Maxxam ID		KT4724		KT4725	KT4726	KT4727		
Sampling Date		2011/08/24		2011/08/23	2011/08/22	2011/08/24		
COC Number		ES363211		ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD LIVER-TB3**	**QC Batch**	**11-SALMON-TB1**	**11-SALMON-TB2**	**11-SALMON-TB3**	**RDL**	**QC Batch**
Inorganics								
Crude Fat	%	39	2645863	19	17	3.1	0.50	2619938

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4728	KT4729	KT4729	KT4730		
Sampling Date		2011/08/23	2011/08/24	2011/08/24	2011/08/24		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-SALMON LIVER-TB1**	**11-SALMON LIVER-TB2**	**11-SALMON LIVER-TB2 Lab-Dup**	**11-SALMON LIVER-TB3**	**RDL**	**QC Batch**
Inorganics							
Crude Fat	%	8.1	5.6	5.6	11	0.50	2619938

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4731	KT4732		
Sampling Date		2011/08/26	2011/08/22		
COC Number		ES363211	ES363211		
	Units	**11-MUSSELS-TB1**	**11-CLAMS-TB1**	**RDL**	**QC Batch**
Inorganics					
Crude Fat	%	1.7	1.2	0.50	2619938

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4604	KT4609		KT4610	KT4611		
Sampling Date		2011/08/23	2011/08/23		2011/08/23	2011/08/23		
COC Number		ES363211	ES363211		ES363211	ES363211		
	Units	**11-SCULPIN-IH1**	**11-SCULPIN-IH2**	**QC Batch**	**11-SCULPIN-IH3**	**11-SCULPIN-IH4**	**RDL**	**QC Batch**
PCBs								
Total PCB	ug/g	<0.050	0.23	2627081	0.25	0.77	0.050	2614961
Surrogate Recovery (%)								
Decachlorobiphenyl	%	112	101 (1)	2627081	104 (1)	102 (1)		2614961

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

Maxxam ID		KT4612	KT4613	KT4614	KT4615	KT4616		
Sampling Date		2011/08/23	2011/08/25	2011/08/25	2011/08/25	2011/08/25		
COC Number		ES363211	ES363211	ES363211	ES363211	ES363211		
	Units	**11-SCULPIN-IH5**	**11-SCULPIN-IH6**	**11-SCULPIN-IH7**	**11-SCULPIN-IH8**	**11-SCULPIN-IH9**	**RDL**	**QC Batch**
PCBs								
Total PCB	ug/g	0.99	0.67	0.051	0.82	<0.050	0.050	2614961
Surrogate Recovery (%)								
Decachlorobiphenyl	%	105 (1)	108 (1)	104 (1)	98 (1)	119		2614961

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4617	KT4618	KT4619	KT4620		
Sampling Date		2011/08/25	2011/08/23	2011/08/24	2011/08/25		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-SCULPIN-IH10**	**11-ROCKCOD-IH1**	**11-ROCKCOD-IH2**	**11-ROCKCOD-IH3**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	0.44	<0.050	0.099	0.32	0.050	2614961
Surrogate Recovery (%)							
Decachlorobiphenyl	%	108 (1)	107	105 (1)	109 (1)		2614961

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

Maxxam ID		KT4621	KT4622	KT4623	KT4624		
Sampling Date		2011/08/23	2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-IH4**	**11-ROCKCOD-IH5**	**11-ROCKCOD-IH6**	**11-ROCKCOD-IH7**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	0.72	0.10	0.19	0.11	0.050	2614961
Surrogate Recovery (%)							
Decachlorobiphenyl	%	110 (1)	116 (1)	118 (1)	106 (1)		2614961

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4625	KT4626	KT4627	KT4627		
Sampling Date		2011/08/23	2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-IH8**	**11-ROCKCOD-IH9**	**11-ROCKCOD-IH10**	**11-ROCKCOD-IH10 Lab-Dup**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	0.45	0.27	0.37	0.29	0.050	2614961
Surrogate Recovery (%)							
Decachlorobiphenyl	%	99 (1)	108 (1)	120 (1)	103		2614961

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

Maxxam ID		KT4628	KT4629		KT4630		
Sampling Date		2011/08/23	2011/08/23		2011/08/23		
COC Number		ES363211	ES363211		ES363211		
	Units	**11-SCULPIN LIVER-IH1**	**11-SCULPIN LIVER-IH2**	**QC Batch**	**11-SCULPIN LIVER-IH3**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	8.1	3.3	2614961	3.7	0.050	2627081
Surrogate Recovery (%)							
Decachlorobiphenyl	%	130 (1)	117 (1)	2614961	117 (1)		2627081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4631	KT4632	KT4633		
Sampling Date		2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD LIVER-IH1**	**11-ROCKCOD LIVER-IH2**	**11-ROCKCOD LIVER-IH3**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/g	20	34	26	0.050	2627081
Surrogate Recovery (%)						
Decachlorobiphenyl	%	128 (1)	130 (1)	124 (1)		2627081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

Maxxam ID		KT4633	KT4634	KT4635	KT4636		
Sampling Date		2011/08/23	2011/08/23	2011/08/23	2011/08/25		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD LIVER-IH3 Lab-Dup**	**11-SCULPIN-0H1**	**11-SCULPIN-0H2**	**11-SCULPIN-0H3**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	26	<0.050	<0.050	0.083	0.050	2627081
Surrogate Recovery (%)							
Decachlorobiphenyl	%	124	117	104	111 (1)		2627081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4637	KT4638	KT4639	KT4640		
Sampling Date		2011/08/23	2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-SCULPIN-0H4**	**11-SCULPIN-0H5**	**11-SCULPIN-0H6**	**11-SCULPIN-0H7**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	<0.050	<0.050	<0.050	0.052	0.050	2627081
Surrogate Recovery (%)							
Decachlorobiphenyl	%	120	104	111	105 (1)		2627081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

Maxxam ID		KT4641	KT4642	KT4643	KT4644		
Sampling Date		2011/08/23	2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-SCULPIN-0H8**	**11-SCULPIN-0H9**	**11-SCULPIN-0H10**	**11-SCULPIN LIVER-OH1**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	<0.050	<0.050	0.23	0.54	0.050	2627081
Surrogate Recovery (%)							
Decachlorobiphenyl	%	101	100	110 (1)	105 (1)		2627081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4645	KT4646		KT4647		
Sampling Date		2011/08/23	2011/08/23		2011/08/23		
COC Number		ES363211	ES363211		ES363211		
	Units	**11-SCULPIN LIVER-OH2**	**11-SCULPIN LIVER-OH3**	**QC Batch**	**11-ROCKCOD-OH1**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	0.32	0.24	2627081	0.20	0.050	2630918
Surrogate Recovery (%)							
Decachlorobiphenyl	%	104 (1)	85 (1)	2627081	94 (1)		2630918

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

Maxxam ID		KT4647	KT4648	KT4649	KT4650		
Sampling Date		2011/08/23	2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-OH1 Lab-Dup**	**11-ROCKCOD-OH2**	**11-ROCKCOD-OH3**	**11-ROCKCOD-OH4**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	0.21	0.15	1.1	0.51	0.050	2630918
Surrogate Recovery (%)							
Decachlorobiphenyl	%	105	94 (1)	90 (1)	95 (1)		2630918

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4651	KT4652	KT4653	KT4654		
Sampling Date		2011/08/23	2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-OH5**	**11-ROCKCOD-OH6**	**11-ROCKCOD-OH7**	**11-ROCKCOD-OH8**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	0.11	0.88	0.058	0.095	0.050	2630918
Surrogate Recovery (%)							
Decachlorobiphenyl	%	110 (1)	112 (1)	101 (1)	103 (1)		2630918

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

Maxxam ID		KT4655	KT4656	KT4657		
Sampling Date		2011/08/23	2011/08/23	2011/08/23		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-OH9**	**11-ROCKCOD-OH10**	**11-ROCKCOD LIVER-OH1**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/g	<0.050	0.078	16	0.050	2630918
Surrogate Recovery (%)						
Decachlorobiphenyl	%	108	97 (1)	91 (1)		2630918

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

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Report Date: 2012/03/22

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4658	KT4659	KT4660		
Sampling Date		2011/08/23	2011/08/23	2011/08/25		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD LIVER-OH2**	**11-ROCKCOD LIVER-OH3**	**11-MUSSELS-SBA(I)1**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/g	21	5.8	0.23	0.050	2630918
Surrogate Recovery (%)						
Decachlorobiphenyl	%	83 (1)	78 (1)	86 (1)		2630918

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

Maxxam ID		KT4661	KT4662	KT4663	KT4664		
Sampling Date		2011/08/26	2011/08/26	2011/08/25	2011/08/25		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-MUSSELS-SBA(I)2**	**11-MUSSELS-SBA(I)3**	**11-CLAMS-SBA(I)1**	**11-CLAMS-SBA(I)2**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	0.21	0.25	<0.050	0.068	0.050	2630918
Surrogate Recovery (%)							
Decachlorobiphenyl	%	88 (1)	89 (1)	103	90 (1)		2630918

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4665		KT4666	KT4667		
Sampling Date		2011/08/25		2011/08/18	2011/08/18		
COC Number		ES363211		ES363211	ES363211		
	Units	**11-CLAMS-SBA(I)3**	**QC Batch**	**11-MUSSELS-SBA(II)1**	**11-MUSSELS-SBA(II)2**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	0.054	2630918	0.12	0.16	0.050	2632754
Surrogate Recovery (%)							
Decachlorobiphenyl	%	92 (1)	2630918	105 (1)	101 (1)		2632754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

Maxxam ID		KT4668	KT4669	KT4670	KT4671		
Sampling Date		2011/08/18	2011/08/18	2011/08/18	2011/08/18		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-MUSSELS-SBA(II)3**	**11-CLAMS-SBA(II)1**	**11-CLAMS-SBA(II)2**	**11-CLAMS-SBA(II)3**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	0.12	0.054	0.062	<0.050	0.050	2632754
Surrogate Recovery (%)							
Decachlorobiphenyl	%	96 (1)	97 (1)	104 (1)	98		2632754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4672	KT4672	KT4673	KT4674		
Sampling Date		2011/08/24	2011/08/24	2011/08/24	2011/08/24		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-SCULPIN-BHT1**	**11-SCULPIN-BHT1 Lab-Dup**	**11-SCULPIN-BHT2**	**11-SCULPIN-BHT3**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	2632754
Surrogate Recovery (%)							
Decachlorobiphenyl	%	104	105	107	124		2632754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4675		KT4676	KT4677	KT4678		
Sampling Date		2011/08/24		2011/08/24	2011/08/24	2011/08/24		
COC Number		ES363211		ES363211	ES363211	ES363211		
	Units	**11-SCULPIN-BHT4**	**QC Batch**	**11-SCULPIN-BHT5**	**11-SCULPIN-BHT6**	**11-SCULPIN-BHT7**	**RDL**	**QC Batch**
PCBs								
Total PCB	ug/g	<0.050	2627081	<0.050	<0.050	<0.050	0.050	2632754
Surrogate Recovery (%)								
Decachlorobiphenyl	%	108	2627081	112	110	116		2632754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4679	KT4680	KT4681		
Sampling Date		2011/08/24	2011/08/24	2011/08/23		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-SCULPIN-BHT8**	**11-SCULPIN-BHT9**	**11-SCULPIN-BHT10**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/g	<0.050	<0.050	<0.050	0.050	2632754
Surrogate Recovery (%)						
Decachlorobiphenyl	%	110	112	110		2632754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4682	KT4683	KT4684		
Sampling Date		2011/08/24	2011/08/24	2011/08/23		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-SCULPIN LIVER-BHT1**	**11-SCULPIN LIVER-BHT2**	**11-SCULPIN LIVER-BHT3**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/g	0.11	0.15	<0.10	0.10	2632754
Surrogate Recovery (%)						
Decachlorobiphenyl	%	98 (1)	103 (1)	100 (2)		2632754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260. Elevated PCB RDL due to matrix / co-extractive interference.
(2) Elevated PCB RDL due to matrix / co-extractive interference.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4685	KT4686	KT4686	KT4687		
Sampling Date		2011/08/21	2011/08/21	2011/08/21	2011/08/21		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-BHT1**	**11-ROCKCOD-BHT2**	**11-ROCKCOD-BHT2 Lab-Dup**	**11-ROCKCOD-BHT3**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	2614169
Surrogate Recovery (%)							
Decachlorobiphenyl	%	101	91	99	91		2614169

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4688	KT4689	KT4690	KT4691		
Sampling Date		2011/08/21	2011/08/21	2011/08/21	2011/08/21		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-BHT4**	**11-ROCKCOD-BHT5**	**11-ROCKCOD-BHT6**	**11-ROCKCOD-BHT7**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	2614169
Surrogate Recovery (%)							
Decachlorobiphenyl	%	93	87	101	89		2614169

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4692	KT4693	KT4694		
Sampling Date		2011/08/21	2011/08/21	2011/08/21		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-BHT8**	**11-ROCKCOD-BHT9**	**11-ROCKCOD-BHT10**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/g	<0.050	<0.050	<0.050	0.050	2614169
Surrogate Recovery (%)						
Decachlorobiphenyl	%	98	104	98		2614169

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4695	KT4696	KT4697		
Sampling Date		2011/08/21	2011/08/21	2011/08/21		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD LIVER-BHT1**	**11-ROCKCOD LIVER-BHT2**	**11-ROCKCOD LIVER-BHT3**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/g	0.11	<0.10	<0.10	0.10	2614169
Surrogate Recovery (%)						
Decachlorobiphenyl	%	95 (1)	82 (2)	84 (2)		2614169

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260. Elevated PCB RDL due to matrix / co-extractive interference.
(2) Elevated PCB RDL due to matrix / co-extractive interference.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4698		KT4699	KT4700	KT4701		
Sampling Date		2011/08/25		2011/08/24	2011/08/24	2011/08/24		
COC Number		ES363211		ES363211	ES363211	ES363211		
	Units	**11-MUSSELS-BHT1**	**RDL**	**11-SCULPIN-TB1**	**11-SCULPIN-TB2**	**11-SCULPIN-TB3**	**RDL**	**QC Batch**
PCBs								
Total PCB	ug/g	<0.10	0.10	<0.050	<0.050	<0.050	0.050	2614169
Surrogate Recovery (%)								
Decachlorobiphenyl	%	95 (1)		82	84	83		2614169

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PCB RDL due to matrix / co-extractive interference.

Maxxam ID		KT4702	KT4703	KT4704		KT4705		
Sampling Date		2011/08/24	2011/08/24	2011/08/24		2011/08/24		
COC Number		ES363211	ES363211	ES363211		ES363211		
	Units	**11-SCULPIN-TB4**	**11-SCULPIN-TB5**	**11-SCULPIN-TB6**	**QC Batch**	**11-SCULPIN-TB7**	**RDL**	**QC Batch**
PCBs								
Total PCB	ug/g	<0.050	<0.050	<0.050	2614169	<0.050	0.050	2632754
Surrogate Recovery (%)								
Decachlorobiphenyl	%	92	88	82	2614169	103		2632754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4706		KT4707	KT4708		
Sampling Date		2011/08/24		2011/08/24	2011/08/24		
COC Number		ES363211		ES363211	ES363211		
	Units	**11-SCULPIN-TB8**	**QC Batch**	**11-SCULPIN-TB9**	**11-SCULPIN-TB10**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	<0.050	2632754	<0.050	<0.050	0.050	2640552
Surrogate Recovery (%)							
Decachlorobiphenyl	%	113	2632754	116	105		2640552

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4709	KT4709	KT4710		
Sampling Date		2011/08/24	2011/08/24	2011/08/24		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-SCULPIN LIVER-TB1**	**11-SCULPIN LIVER-TB1 Lab-Dup**	**11-SCULPIN LIVER-TB2**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/g	0.11	0.11	0.12	0.10	2640552
Surrogate Recovery (%)						
Decachlorobiphenyl	%	87 (1)	84 (2)	93 (1)		2640552

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260. Elevated PCB RDL due to matrix / co-extractive interference.
(2) Elevated PCB RDL due to matrix / co-extractive interference.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4711		KT4712		KT4713		
Sampling Date		2011/08/26		2011/08/24		2011/08/24		
COC Number		ES363211		ES363211		ES363211		
	Units	**11-SCULPIN LIVER-TB3**	**RDL**	**11-ROCKCOD-TB1**	**QC Batch**	**11-ROCKCOD-TB2**	**RDL**	**QC Batch**
PCBs								
Total PCB	ug/g	<0.10	0.10	<0.050	2640552	<0.050	0.050	2616353
Surrogate Recovery (%)								
Decachlorobiphenyl	%	73 (1)		104	2640552	114		2616353

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260. Elevated PCB RDL due to matrix / co-extractive interference.

Maxxam ID		KT4713	KT4714	KT4715	KT4716		
Sampling Date		2011/08/24	2011/08/24	2011/08/24	2011/08/24		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-TB2 Lab-Dup**	**11-ROCKCOD-TB3**	**11-ROCKCOD-TB4**	**11-ROCKCOD-TB5**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	2616353
Surrogate Recovery (%)							
Decachlorobiphenyl	%	110	124	112	107		2616353

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4717	KT4718	KT4719	KT4720		
Sampling Date		2011/08/24	2011/08/24	2011/08/24	2011/08/24		
COC Number		ES363211	ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD-TB6**	**11-ROCKCOD-TB7**	**11-ROCKCOD-TB8**	**11-ROCKCOD-TB9**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	2616353
Surrogate Recovery (%)							
Decachlorobiphenyl	%	111	111	113	108		2616353

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		KT4721		KT4722	KT4723		
Sampling Date		2011/08/24		2011/08/24	2011/08/24		
COC Number		ES363211		ES363211	ES363211		
	Units	**11-ROCKCOD-TB10**	**RDL**	**11-ROCKCOD LIVER-TB1**	**11-ROCKCOD LIVER-TB2**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/g	<0.050	0.050	0.19	0.14	0.10	2616353
Surrogate Recovery (%)							
Decachlorobiphenyl	%	113		90 (1)	94 (1)		2616353

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260. Elevated PCB RDL due to matrix / co-extractive interference.

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4724		KT4725	KT4726	KT4727		
Sampling Date		2011/08/24		2011/08/23	2011/08/22	2011/08/24		
COC Number		ES363211		ES363211	ES363211	ES363211		
	Units	**11-ROCKCOD LIVER-TB3**	**RDL**	**11-SALMON-TB1**	**11-SALMON-TB2**	**11-SALMON-TB3**	**RDL**	**QC Batch**
PCBs								
Total PCB	ug/g	0.22	0.10	<0.050	<0.050	<0.050	0.050	2616353
Surrogate Recovery (%)								
Decachlorobiphenyl	%	83 (1)		105	108	111		2616353

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Aroclor 1260. Elevated PCB RDL due to matrix / co-extractive interference.

Maxxam ID		KT4728	KT4729	KT4730		
Sampling Date		2011/08/23	2011/08/24	2011/08/24		
COC Number		ES363211	ES363211	ES363211		
	Units	**11-SALMON LIVER-TB1**	**11-SALMON LIVER-TB2**	**11-SALMON LIVER-TB3**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/g	<0.050	<0.050	<0.050	0.050	2616353
Surrogate Recovery (%)						
Decachlorobiphenyl	%	114	97	106		2616353

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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POLYCHLORINATED BIPHENYLS BY GC-ECD (TISSUE)

Maxxam ID		KT4731	KT4732		
Sampling Date		2011/08/26	2011/08/22		
COC Number		ES363211	ES363211		
	Units	**11-MUSSELS-TB1**	**11-CLAMS-TB1**	**RDL**	**QC Batch**
PCBs					
Total PCB	ug/g	<0.050	<0.050	0.050	2616353
Surrogate Recovery (%)					
Decachlorobiphenyl	%	124	121		2616353

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Package 1	5.7°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Revised report: Revised to correct page formatting. MHL March 22, 2012.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Stantec Consulting Ltd
Attention: Jim Slade
Client Project #: 121411777.210
P.O. #: 16400NR
Site Location: HOPEDALE BIOTA

Quality Assurance Report

Maxxam Job Number: DB1D4909

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2614169	KJO	Reagent Blank	Decachlorobiphenyl	2011/09/29		83	%	30 - 130
			Total PCB	2011/09/29	<0.050		ug/g	
		Matrix Spike [KT4686-01]	Decachlorobiphenyl	2011/09/29		95	%	30 - 130
			Total PCB	2011/09/29		100	%	30 - 130
		Spiked Blank	Decachlorobiphenyl	2011/09/29		58 (1)	%	30 - 130
			Total PCB	2011/09/29		85	%	30 - 130
		Method Blank	Decachlorobiphenyl	2011/09/29		85	%	30 - 130
			Total PCB	2011/09/29	<0.050		ug/g	
		RPD [KT4686-01]	Total PCB	2011/09/29	NC		%	50
2614961	KJO	Reagent Blank	Decachlorobiphenyl	2011/10/06		102	%	30 - 130
			Total PCB	2011/10/06	<0.050		ug/g	
		Matrix Spike [KT4627-01]	Decachlorobiphenyl	2011/10/06		112	%	30 - 130
			Total PCB	2011/10/06		NC	%	30 - 130
		Spiked Blank	Decachlorobiphenyl	2011/10/06		115	%	30 - 130
			Total PCB	2011/10/06		92	%	30 - 130
		Method Blank	Decachlorobiphenyl	2011/10/06		98	%	30 - 130
			Total PCB	2011/10/06	<0.050		ug/g	
		RPD [KT4627-01]	Total PCB	2011/10/06	24.2		%	50
2616353	KJO	Reagent Blank	Decachlorobiphenyl	2011/10/11		124	%	30 - 130
			Total PCB	2011/10/11	<0.050		ug/g	
		Matrix Spike [KT4713-01]	Decachlorobiphenyl	2011/10/11		100	%	30 - 130
			Total PCB	2011/10/11		70	%	30 - 130
		Spiked Blank	Decachlorobiphenyl	2011/10/11		128	%	30 - 130
			Total PCB	2011/10/11		93	%	30 - 130
		Method Blank	Decachlorobiphenyl	2011/10/11		101	%	30 - 130
			Total PCB	2011/10/11	<0.050		ug/g	
		RPD [KT4713-01]	Total PCB	2011/10/11	NC		%	50
2619938	BBD	QC Standard	Crude Fat	2011/09/13		116	%	80 - 120
		Method Blank	Crude Fat	2011/09/13	<0.50		%	
		RPD [KT4729-01]	Crude Fat	2011/09/13	0		%	25
2627081	KJO	Reagent Blank	Decachlorobiphenyl	2011/10/18		103	%	30 - 130
			Total PCB	2011/10/18	<0.050		ug/g	
		Matrix Spike [KT4633-01]	Decachlorobiphenyl	2011/10/18		72	%	30 - 130
			Total PCB	2011/10/18		NC	%	30 - 130
		Spiked Blank	Decachlorobiphenyl	2011/10/18		104	%	30 - 130
			Total PCB	2011/10/18		79	%	30 - 130
		Method Blank	Decachlorobiphenyl	2011/10/18		99	%	30 - 130
			Total PCB	2011/10/18	<0.050		ug/g	
		RPD [KT4633-01]	Total PCB	2011/10/18	1.5		%	50
2629743	BBD	QC Standard	Crude Fat	2011/09/20		113	%	80 - 120
		Method Blank	Crude Fat	2011/09/20	<0.50		%	
		RPD [KT4697-01]	Crude Fat	2011/09/20	18.9		%	25
2630918	KJO	Reagent Blank	Decachlorobiphenyl	2011/10/18		101	%	30 - 130
			Total PCB	2011/10/18	<0.050		ug/g	
		Matrix Spike [KT4647-01]	Decachlorobiphenyl	2011/10/18		103	%	30 - 130
			Total PCB	2011/10/18		NC	%	30 - 130
		Spiked Blank	Decachlorobiphenyl	2011/10/18		99	%	30 - 130
			Total PCB	2011/10/18		79	%	30 - 130
		Method Blank	Decachlorobiphenyl	2011/10/18		103	%	30 - 130
			Total PCB	2011/10/18	<0.050		ug/g	

Stantec Consulting Ltd
Attention: Jim Slade
Client Project #: 121411777.210
P.O. #: 16400NR
Site Location: HOPEDALE BIOTA

Quality Assurance Report (Continued)

Maxxam Job Number: DB1D4909

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2630918	KJO	RPD [KT4647-01]	Total PCB	2011/10/18	NC		%	50
2632754	KJO	Reagent Blank	Decachlorobiphenyl	2011/10/19		112	%	30 - 130
			Total PCB	2011/10/19	<0.050		ug/g	
		Matrix Spike [KT4672-01]	Decachlorobiphenyl	2011/10/19		102	%	30 - 130
			Total PCB	2011/10/19		84	%	30 - 130
		Spiked Blank	Decachlorobiphenyl	2011/10/19		109	%	30 - 130
			Total PCB	2011/10/19		117	%	30 - 130
		Method Blank	Decachlorobiphenyl	2011/10/19		97	%	30 - 130
			Total PCB	2011/10/19	<0.050		ug/g	
		RPD [KT4672-01]	Total PCB	2011/10/19	NC		%	50
2634443	BBD	QC Standard	Crude Fat	2011/09/27		112	%	80 - 120
		Method Blank	Crude Fat	2011/09/27	<0.50		%	
2640536	BBD	QC Standard	Crude Fat	2011/09/30		116	%	80 - 120
		Method Blank	Crude Fat	2011/09/30	<0.50		%	
		RPD [KT4632-01]	Crude Fat	2011/09/30	11.4		%	25
2640551	CAC	QC Standard	Crude Fat	2011/10/13		112	%	80 - 120
		Method Blank	Crude Fat	2011/10/13	<0.50		%	
		RPD [KT4723-01]	Crude Fat	2011/10/13	3.7		%	25
2640552	KJO	Reagent Blank	Decachlorobiphenyl	2011/10/19		113	%	30 - 130
			Total PCB	2011/10/19	<0.050		ug/g	
		Matrix Spike [KT4709-01]	Decachlorobiphenyl	2011/10/19		88	%	30 - 130
			Total PCB	2011/10/19		101	%	30 - 130
		Spiked Blank	Decachlorobiphenyl	2011/10/19		120	%	30 - 130
			Total PCB	2011/10/19		143 (2)	%	30 - 130
		Method Blank	Decachlorobiphenyl	2011/10/19		108	%	30 - 130
			Total PCB	2011/10/19	<0.050		ug/g	
		RPD [KT4709-01]	Total PCB	2011/10/19	NC		%	50
2642602	BBD	QC Standard	Crude Fat	2011/10/11		109	%	80 - 120
		Method Blank	Crude Fat	2011/10/11	<0.50		%	
		RPD [KT4624-01]	Crude Fat	2011/10/11	NC		%	25
2645863	BBD	QC Standard	Crude Fat	2011/10/13		100	%	80 - 120
		Method Blank	Crude Fat	2011/10/13	<0.50		%	
		RPD [KT4664-01]	Crude Fat	2011/10/13	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Reagent Blank: A blank matrix containing all reagents used in the analytical procedure. Used to determine any analytical contamination.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) PCB surrogate not within acceptance limits.
(2) Spike: results are outside acceptance limit. Analysis was repeated with similar results.

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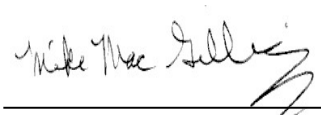
Validation Signature Page

Maxxam Job #: B1D4909

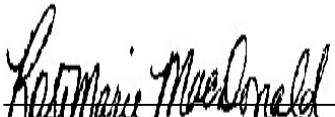
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

ALAN STEWART, Scientific Specialist (Organics)

COLLEEN ACKER



MIKE MACGILLIVRAY, Scientific Specialist (Inorganics)



ROSE MACDONALD, Scientific Specialist (Organics)

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your C.O.C. #: ES33381

Attention: Jim Slade
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/09/09

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1D4120
Received: 2011/09/01, 10:03

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PCBs in water by GC/ECD	4	2011/09/07	2011/09/09	ATL SOP 00107 R4	Based on EPA8082
Total Suspended Solids	4	N/A	2011/09/02	ATL SOP 00007 R3	based on EPA 160.2
Turbidity	4	N/A	2011/09/08	ATL SOP 00011 R5	based on EPA 180.1

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

==========

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Total cover pages: 1

Maxxam Job #: B1D4120
Report Date: 2011/09/09

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF WATER

Maxxam ID		KT0516	KT0517	KT0518		KT0519		
Sampling Date		2011/08/30	2011/08/30	2011/08/30		2011/08/30		
	Units	**ODP-AUG 30-1:00AM**	**ODP-AUG 30-6:00AM**	**HARBOUR-AUG 30-1:00AM**	**RDL**	**HARBOUR-AUG 30-6:00AM**	**RDL**	**QC Batch**
Inorganics								
Total Suspended Solids	mg/L	5	5	11	2	<5	5	2602600
Turbidity	NTU	1.7	1.5	11	0.1	4.0	0.1	2607465

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		KT0516	KT0517	KT0518	KT0519		
Sampling Date		2011/08/30	2011/08/30	2011/08/30	2011/08/30		
	Units	**ODP-AUG 30-1:00AM**	**ODP-AUG 30-6:00AM**	**HARBOUR-AUG 30-1:00AM**	**HARBOUR-AUG 30-6:00AM**	**RDL**	**QC Batch**
PCBs							
Total PCB	ug/L	<0.05	<0.05	0.06	0.10	0.05	2605862
Surrogate Recovery (%)							
Decachlorobiphenyl	%	81(1)	88(1)	83(1)	71(2)		2605862

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1254.
(2) - Aroclor 1260.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1D4120
Report Date: 2011/09/09

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

Package 1	8.5°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1D4120
Report Date: 2011/09/09

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2602600	Total Suspended Solids	2011/09/02					<1	mg/L	5.9	25	100	80 - 120
2605862	Decachlorobiphenyl	2011/09/09	86	30 - 130	71	30 - 130	64	%				
2605862	Total PCB	2011/09/09	98	70 - 130	87	70 - 130	<0.05	ug/L	NC	40		
2607465	Turbidity	2011/09/08					<0.1	NTU	NC	25	101	80 - 120

N/A = Not Applicable
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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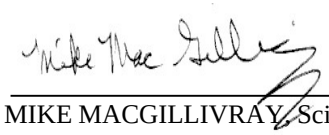
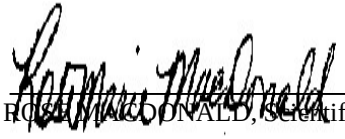
Validation Signature Page

Maxxam Job #: B1D4120

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



MIKE MACGILLIVRAY, Scientific Specialist (Inorganics)



ROSE MACDONALD, Scientific Specialist (Organics)

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your C.O.C. #: ES350611

Attention: Anna Roy
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/09/09

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1D4127
Received: 2011/09/01, 10:02

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PCBs in water by GC/ECD	3	2011/09/07	2011/09/09	ATL SOP 00107 R4	Based on EPA8082
Total Suspended Solids	3	N/A	2011/09/06	ATL SOP 00007 R3	based on EPA 160.2
Turbidity	3	N/A	2011/09/08	ATL SOP 00011 R5	based on EPA 180.1

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

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Total cover pages: 1

Maxxam Job #: B1D4127
Report Date: 2011/09/09

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF WATER

Maxxam ID		KT0588		KT0595		KT0596		
Sampling Date		2011/08/28		2011/08/28		2011/08/28		
	Units	**ODP-AUG28**	**RDL**	**ODP-AUG28 FIELD DUP**	**RDL**	**HARBOUR-AUG28**	**RDL**	**QC Batch**
Inorganics								
Total Suspended Solids	mg/L	10	2	8	5	4	1	2602597
Turbidity	NTU	1.5	0.1	1.5	0.1	1.6	0.1	2607465

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		KT0588	KT0595	KT0596		
Sampling Date		2011/08/28	2011/08/28	2011/08/28		
	Units	**ODP-AUG28**	**ODP-AUG28 FIELD DUP**	**HARBOUR-AUG28**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/L	<0.05	0.07	0.06	0.05	2605862
Surrogate Recovery (%)						
Decachlorobiphenyl	%	82	81(1)	86(1)		2605862

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1254.

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Maxxam Job #: B1D4127
Report Date: 2011/09/09

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

Package 1	5.5°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

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Report Date: 2011/09/09

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2602597	Total Suspended Solids	2011/09/06					<1	mg/L	1.7	25	99	80 - 120
2605862	Decachlorobiphenyl	2011/09/09	86	30 - 130	71	30 - 130	64	%				
2605862	Total PCB	2011/09/09	98	70 - 130	87	70 - 130	<0.05	ug/L	NC	40		
2607465	Turbidity	2011/09/08					<0.1	NTU	NC	25	101	80 - 120

N/A = Not Applicable
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
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Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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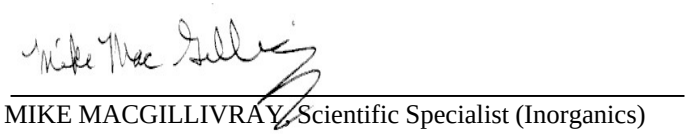
Validation Signature Page

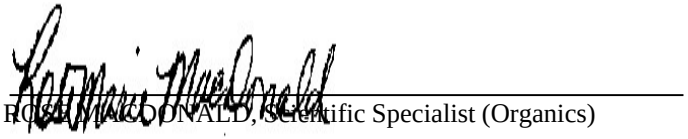
Maxxam Job #: B1D4127

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

KEVIN MACDONALD, Inorganics Supervisor



MIKE MACGILLIVRAY, Scientific Specialist (Inorganics)



ROSS MACDONALD, Scientific Specialist (Organics)

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your C.O.C. #: ES350311

Attention: Anna Roy
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/09/22

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1E1840
Received: 2011/09/15, 10:09

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PCBs in water by GC/ECD	2	2011/09/19	2011/09/21	ATL SOP 00107 R4	Based on EPA8082
Total Suspended Solids	2	N/A	2011/09/19	ATL SOP 00007 R3	based on EPA 160.2
Turbidity	2	N/A	2011/09/19	ATL SOP 00011 R5	based on EPA 180.1

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

==========

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Total cover pages: 1

Maxxam Job #: B1E1840
Report Date: 2011/09/22

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: GA

RESULTS OF ANALYSES OF WATER

Maxxam ID		KW9362		KW9749	KW9749		
Sampling Date		2011/09/12		2011/09/12	2011/09/12		
	Units	**ODP-SEPT 12**	**RDL**	**HARBOUR-SEPT 12**	**HARBOUR-SEPT 12 Lab-Dup**	**RDL**	**QC Batch**
Inorganics							
Total Suspended Solids	mg/L	<2	2	3		1	2616177
Turbidity	NTU	1.7	0.1	2.3	2.2	0.1	2618571

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		KW9362	KW9749		
Sampling Date		2011/09/12	2011/09/12		
	Units	**ODP-SEPT 12**	**HARBOUR-SEPT 12**	**RDL**	**QC Batch**
PCBs					
Total PCB	ug/L	<0.05	<0.05	0.05	2618680
Surrogate Recovery (%)					
Decachlorobiphenyl	%	92	87		2618680

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1E1840
Report Date: 2011/09/22

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: GA

Package 1	9.2°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Sample KW9362-01: Total Suspended Solids: Used all of the sample provided, DL raised.

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Maxxam Job #: B1E1840
Report Date: 2011/09/22

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: GA

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2616177	Total Suspended Solids	2011/09/19					<1	mg/L	12.7	25	99	80 - 120
2618571	Turbidity	2011/09/19					<0.1	NTU	4.5	25	101	80 - 120
2618680	Decachlorobiphenyl	2011/09/21	86	30 - 130	72	30 - 130	65	%				
2618680	Total PCB	2011/09/21	109	70 - 130	99	70 - 130	<0.05	ug/L	NC	40		

N/A = Not Applicable
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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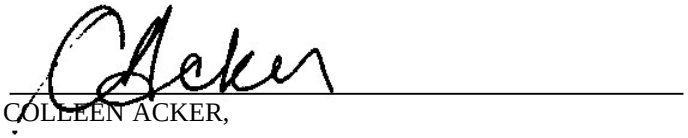
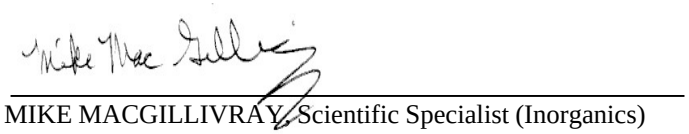
Validation Signature Page

Maxxam Job #: B1E1840

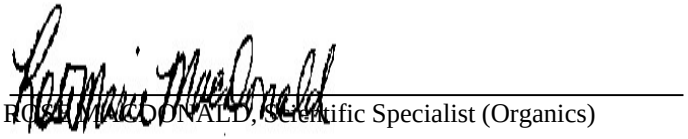
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



COLLEEN ACKER,



MIKE MACGILLIVRAY, Scientific Specialist (Inorganics)



ROBERT MACDONALD, Scientific Specialist (Organics)

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your C.O.C. #: ES350711

Attention: Anna Roy
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/09/26

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1E4427
Received: 2011/09/20, 10:57

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PCBs in water by GC/ECD	2	2011/09/21	2011/09/23	ATL SOP 00107 R4	Based on EPA8082
Total Suspended Solids	2	N/A	2011/09/22	ATL SOP 00007 R3	based on EPA 160.2
Turbidity	2	N/A	2011/09/22	ATL SOP 00011 R5	based on EPA 180.1

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

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MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

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Total cover pages: 1

Maxxam Job #: B1E4427
Report Date: 2011/09/26

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: GA

RESULTS OF ANALYSES OF WATER

Maxxam ID		KY3444	KY3468		
Sampling Date		2011/09/16 11:35	2011/09/16 11:35		
	Units	**ODP-SEPT.16**	**HARBOUR-SEPT.16**	**RDL**	**QC Batch**
Inorganics					
Total Suspended Solids	mg/L	3	9	2	2621151
Turbidity	NTU	1.4	3.5	0.1	2623039

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		KY3444	KY3468		
Sampling Date		2011/09/16 11:35	2011/09/16 11:35		
	Units	**ODP-SEPT.16**	**HARBOUR-SEPT.16**	**RDL**	**QC Batch**
PCBs					
Total PCB	ug/L	<0.06	<0.06	0.06	2621181
Surrogate Recovery (%)					
Decachlorobiphenyl	%	86(1)	83(1)		2621181

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Elevated PCB RDL due to insufficient sample.

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Maxxam Job #: B1E4427
Report Date: 2011/09/26

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: GA

Package 1	9.8°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

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Maxxam Job #: B1E4427
Report Date: 2011/09/26

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: GA

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2621151	Total Suspended Solids	2011/09/22					<1	mg/L	3.5	25	98	80 - 120
2621181	Decachlorobiphenyl	2011/09/23	69	30 - 130	69	30 - 130	45	%				
2621181	Total PCB	2011/09/23	98	70 - 130	96	70 - 130	<0.05	ug/L	NC	40		
2623039	Turbidity	2011/09/22					<0.1	NTU	NC	25	100	80 - 120

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RPD = Relative Percent Difference
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Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
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Validation Signature Page

Maxxam Job #: B1E4427

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

COLLEEN ACKER,

KEVIN MACDONALD, Inorganics Supervisor

ROBERT MACDONALD, Scientific Specialist (Organics)

==========

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your C.O.C. #: ES333611

Attention: Anna Roy
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/10/27

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1G2909
Received: 2011/10/19, 11:33

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PCBs in water by GC/ECD	2	2011/10/20	2011/10/26	ATL SOP 00107	Based on EPA8082
Total Suspended Solids	2	N/A	2011/10/21	ATL SOP 00007	based on EPA 160.2
Turbidity	2	N/A	2011/10/27	ATL SOP 00011	based on EPA 180.1

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Encryption Key

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MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

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Total cover pages: 1

Maxxam Job #: B1G2909
Report Date: 2011/10/27

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: GA

RESULTS OF ANALYSES OF WATER

Maxxam ID		LH6048	LH6061		
Sampling Date		2011/10/10	2011/10/10		
	Units	**ODP-OCT10**	**HARBOUR-OCT**	**RDL**	**QC Batch**
Inorganics					
Total Suspended Solids	mg/L	2	2	1	2653534
Turbidity	NTU	0.9	1.3	0.1	2662057

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		LH6048	LH6061		
Sampling Date		2011/10/10	2011/10/10		
	Units	**ODP-OCT10**	**HARBOUR-OCT**	**RDL**	**QC Batch**
PCBs					
Total PCB	ug/L	<0.06	<0.06	0.06	2655377
Surrogate Recovery (%)					
Decachlorobiphenyl	%	74(1)	82(1)		2655377

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Elevated PCB RDL due to matrix / co-extractive interference.

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Maxxam Job #: B1G2909
Report Date: 2011/10/27

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: GA

Package 1	15.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Total Suspended Solids: Sample integrity may have been compromised, the samples exceeded their hold time prior to being analyzed.

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Maxxam Job #: B1G2909
Report Date: 2011/10/27

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: GA

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2653534	Total Suspended Solids	2011/10/21					<1	mg/L	1.7	25	101	80 - 120
2655377	Decachlorobiphenyl	2011/10/26	80	30 - 130	62	30 - 130	55	%				
2655377	Total PCB	2011/10/26	98	70 - 130	109	70 - 130	<0.05	ug/L	NC	40		
2662057	Turbidity	2011/10/27					<0.1	NTU	6.5	25	100	80 - 120

N/A = Not Applicable
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Validation Signature Page

Maxxam Job #: B1G2909

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COLLEEN ACKER,

MIKE MACGILLIVRAY, Scientific Specialist (Inorganics)

ROBERT MACDONALD, Scientific Specialist (Organics)

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your C.O.C. #: ES350811

Attention: Anna Roy
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/11/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1G9918
Received: 2011/10/29, 10:20

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PCBs in water by GC/ECD	2	2011/10/31	2011/11/07	ATL SOP 00107	Based on EPA8082
Total Suspended Solids	2	N/A	2011/10/31	ATL SOP 00007	based on EPA 160.2
Turbidity	2	N/A	2011/11/07	ATL SOP 00011	based on EPA 180.1

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Encryption Key

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MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

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Total cover pages: 1

Maxxam Job #: B1G9918
Report Date: 2011/11/07

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF WATER

Maxxam ID		LL0430	LL0432		
Sampling Date		2011/10/24	2011/10/24		
	Units	**ODP-OCT.24**	**HARBOUR-OCT.24**	**RDL**	**QC Batch**
Inorganics					
Total Suspended Solids	mg/L	2	2	1	2665162
Turbidity	NTU	0.6	1.0	0.1	2673240

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		LL0430	LL0432		
Sampling Date		2011/10/24	2011/10/24		
	Units	**ODP-OCT.24**	**HARBOUR-OCT.24**	**RDL**	**QC Batch**
PCBs					
Total PCB	ug/L	<0.05	<0.05	0.05	2666023
Surrogate Recovery (%)					
Decachlorobiphenyl	%	86	87		2666023

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1G9918
Report Date: 2011/11/07

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

Package 1	8.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1G9918
Report Date: 2011/11/07

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2665162	Total Suspended Solids	2011/10/31					<1	mg/L	4.8	25	96	80 - 120
2666023	Decachlorobiphenyl	2011/11/07	91	30 - 130	66	30 - 130	88	%				
2666023	Total PCB	2011/11/07	94	70 - 130	97	70 - 130	<0.05	ug/L	NC	40		
2673240	Turbidity	2011/11/07					<0.1	NTU	NC	25	101	80 - 120

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RPD = Relative Percent Difference
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Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
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Validation Signature Page

Maxxam Job #: B1G9918

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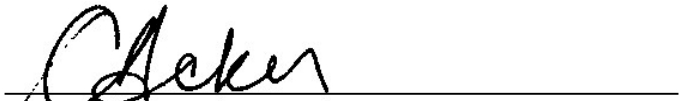
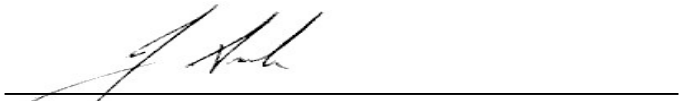
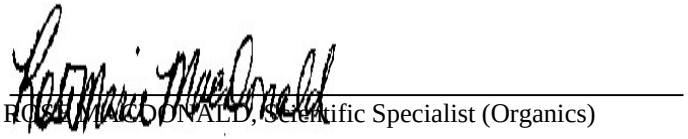


COLLEEN ACKER,



JERRY ARENOVICH, Inorganics Manager



ROBERT MACDONALD, Scientific Specialist (Organics)

==========

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your C.O.C. #: ES350911

Attention: Anna Roy
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/11/18

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1H7099
Received: 2011/11/10, 11:10

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PCBs in water by GC/ECD	3	2011/11/14	2011/11/18	ATL SOP 00107	Based on EPA8082
Total Suspended Solids	3	N/A	2011/11/16	ATL SOP 00007	based on EPA 160.2
Turbidity	3	N/A	2011/11/16	ATL SOP 00011	based on EPA 180.1

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

==========

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Total cover pages: 1

Maxxam Job #: B1H7099
Report Date: 2011/11/18

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF WATER

Maxxam ID		LO6777	LO6780	LO6781		
Sampling Date		2011/11/07	2011/11/07	2011/11/07		
	Units	**HARBOUR-NOV 7**	**HARBOUR-NOV 7 FIELD DUP**	**ODP-NOV7**	**RDL**	**QC Batch**
Inorganics						
Total Suspended Solids	mg/L	3	2	1	1	2680560
Turbidity	NTU	2.7	2.6	0.8	0.1	2683841

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		LO6777	LO6780	LO6781		
Sampling Date		2011/11/07	2011/11/07	2011/11/07		
	Units	**HARBOUR-NOV 7**	**HARBOUR-NOV 7 FIELD DUP**	**ODP-NOV7**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/L	<0.05	<0.05	<0.05	0.05	2681086
Surrogate Recovery (%)						
Decachlorobiphenyl	%	66	72	41		2681086

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1H7099
Report Date: 2011/11/18

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

Package 1	5.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1H7099
Report Date: 2011/11/18

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: AR

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2680560	Total Suspended Solids	2011/11/16					<1	mg/L	4.4	25	98	80 - 120
2681086	Decachlorobiphenyl	2011/11/18	96	30 - 130	96	30 - 130	120	%				
2681086	Total PCB	2011/11/18	105	70 - 130	122	70 - 130	<0.05	ug/L	NC	40		
2683841	Turbidity	2011/11/16					<0.1	NTU	14.3	25	99	80 - 120

N/A = Not Applicable
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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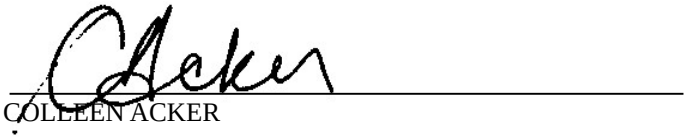
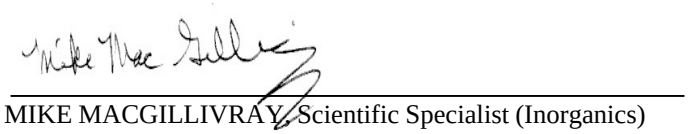
Validation Signature Page

Maxxam Job #: B1H7099

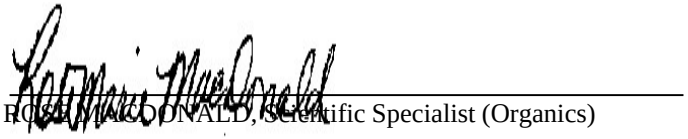
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



COLLEEN ACKER



MIKE MACGILLIVRAY, Scientific Specialist (Inorganics)



ROBERT MACDONALD, Scientific Specialist (Organics)

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your C.O.C. #: ES351111

Attention: Anna Roy
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/11/28

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1I2719
Received: 2011/11/19, 11:15

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PCBs in water by GC/ECD	2	2011/11/23	2011/11/25	ATL SOP 00107	Based on EPA8082
Total Suspended Solids	2	N/A	2011/11/23	ATL SOP 00007	based on EPA 160.2
Turbidity	2	N/A	2011/11/23	ATL SOP 00011	based on EPA 180.1

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

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Total cover pages: 1

Maxxam Job #: B1I2719
Report Date: 2011/11/28

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: JM

RESULTS OF ANALYSES OF WATER

Maxxam ID		LR7007	LR7008	LR7008		
Sampling Date		2011/11/16	2011/11/16	2011/11/16		
	Units	**ODP-NOV16/11**	**HARBOUR-NOV16/11**	**HARBOUR-NOV16/11 Lab-Dup**	**RDL**	**QC Batch**
Inorganics						
Total Suspended Solids	mg/L	<1	26		1	2689460
Turbidity	NTU	0.6	17	19	0.1	2691018

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		LR7007		LR7007		LR7008		
Sampling Date		2011/11/16		2011/11/16		2011/11/16		
	Units	**ODP-NOV16/11**	**RDL**	**ODP-NOV16/11 Lab-Dup**	**RDL**	**HARBOUR-NOV16/11**	**RDL**	**QC Batch**
PCBs								
Total PCB	ug/L	<0.06	0.06	<0.05	0.05	<0.06	0.06	2691237
Surrogate Recovery (%)								
Decachlorobiphenyl	%	69(1)		68		117(1)		2691237

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Elevated PCB RDL due to insufficient sample.

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Maxxam Job #: B1I2719
Report Date: 2011/11/28

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: JM

Package 1	6.3°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1I2719
Report Date: 2011/11/28

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE FLUX STUDY
Your P.O. #: 16400NR
Sampler Initials: JM

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2689460	Total Suspended Solids	2011/11/23					<1	mg/L	4.5	25	97	80 - 120
2691018	Turbidity	2011/11/23					<0.1	NTU	13.0	25	99	80 - 120
2691237	Decachlorobiphenyl	2011/11/25	115(1)	30 - 130	68	30 - 130	62	%				
2691237	Total PCB	2011/11/25	124	70 - 130	104	70 - 130	<0.05	ug/L	NC	40		

N/A = Not Applicable
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) - PCB sample contained sediment.

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Validation Signature Page

Maxxam Job #: B1I2719

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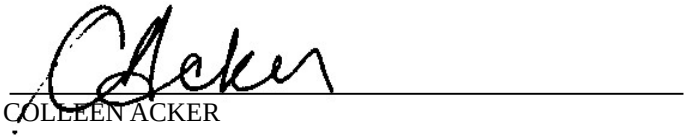
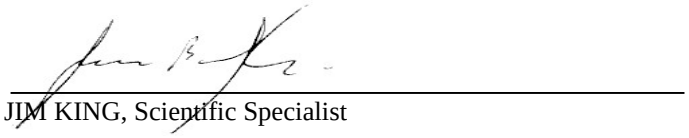
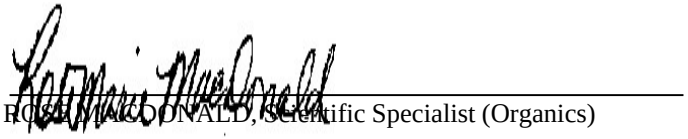


COLLEEN ACKER



JIM KING, Scientific Specialist



ROSA MACDONALD, Scientific Specialist (Organics)

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your C.O.C. #: ES333411

Attention: Jim Slade
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/09/02

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1D0971
Received: 2011/08/26, 9:42

Sample Matrix: Soil
Samples Received: 46

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Moisture	20	N/A	2011/08/26	ATL SOP 00001 R3	MOE Handbook 1983
Moisture	26	N/A	2011/08/27	ATL SOP 00001 R3	MOE Handbook 1983
PCB/DDT in Soil by GC-ECD	40	2011/08/30	2011/09/02	ATL SOP 00106 R4	Based EPA8082
PCB/DDT in Soil by GC-ECD	6	2011/08/31	2011/09/02	ATL SOP 00106 R4	Based EPA8082
Total Organic Carbon in Soil	20	2011/08/31	2011/09/01	ATL SOP 00044 R4/00045 R4	LECO 203-601-224
Total Organic Carbon in Soil	15	2011/09/01	2011/09/01	ATL SOP 00044 R4/00045 R4	LECO 203-601-224
Total Organic Carbon in Soil	11	2011/09/02	2011/09/02	ATL SOP 00044 R4/00045 R4	LECO 203-601-224

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

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Total cover pages: 1

Maxxam Job #: B1D0971
Report Date: 2011/09/02

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

RESULTS OF ANALYSES OF SOIL

Maxxam ID		KR6120	KR6121		KR6122		KR6123	KR6126		KR6127		KR6128		
Sampling Date		2011/08/18	2011/08/18		2011/08/18		2011/08/18	2011/08/18		2011/08/18		2011/08/19		
	Units	**11-SED 22**	**11-SED 21**	**RDL**	**11-SED 19**	**RDL**	**11-SED 18**	**11-SED 17**	**RDL**	**11-SED 20**	**RDL**	**11-SED 52**	**RDL**	**QC Batch**
Inorganics														
Moisture	%	58	48	1	47	1	51	49	1	36	1	29	1	2596179
Organic Carbon (TOC)	g/kg	20	15	0.8	15	1	19	17	0.7	10	0.4	5.0	0.3	2601479

Maxxam ID		KR6129		KR6130		KR6131		KR6132		KR6133		KR6134		KR6135		
Sampling Date		2011/08/19		2011/08/19		2011/08/19		2011/08/19		2011/08/19		2011/08/19		2011/08/19		
	Units	**11-SED 48**	**RDL**	**11-SED 44**	**RDL**	**11-SED 43**	**RDL**	**11-SED 26**	**RDL**	**11-SED 25**	**RDL**	**11-SED 24**	**RDL**	**11-SED 23**	**RDL**	**QC Batch**
Inorganics																
Moisture	%	14	1	44	1	49	1	23	1	68	1	32	1	61	1	2596179
Organic Carbon (TOC)	g/kg	1.1	0.2	16	0.6	15	0.5	3.6	0.3	19	0.5	8.3	0.3	21	0.6	2601479

Maxxam ID		KR6136			KR6137		KR6137		KR6138		KR6139		KR6141		
Sampling Date		2011/08/19			2011/08/19		2011/08/19		2011/08/19		2011/08/19		2011/08/19		
	Units	**11-SED 15**	**RDL**	**QC Batch**	**11-SED 28**	**RDL**	**11-SED 28 Lab-Dup**	**RDL**	**11-SED 27**	**RDL**	**11-SED 29**	**RDL**	**11-SED 35**	**RDL**	**QC Batch**
Inorganics															
Moisture	%	39	1	2596179	44	1			45	1	18	1	31	1	2596179
Organic Carbon (TOC)	g/kg	9.4	0.3	2601479	14	0.7	13	0.8	13	0.7	5.4	0.5	7.4	0.9	2601484

Maxxam ID		KR6142			KR6143		KR6144		KR6145		KR6146		KR6147		
Sampling Date		2011/08/19			2011/08/19		2011/08/19		2011/08/19		2011/08/19		2011/08/19		
	Units	**11-SED 3**	**RDL**	**QC Batch**	**11-SED 2**	**RDL**	**11-SED 5**	**RDL**	**11-SED 6**	**RDL**	**11-SED 7**	**RDL**	**11-SED 1**	**RDL**	**QC Batch**
Inorganics															
Moisture	%	44	1	2596179	55	1	48	1	49	1	53	1	31	1	2596664
Organic Carbon (TOC)	g/kg	11	0.5	2601484	22	0.6	16	0.4	18	0.8	18	0.4	3.9	0.2	2601484

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1D0971
Report Date: 2011/09/02

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

RESULTS OF ANALYSES OF SOIL

Maxxam ID		KR6148		KR6149		KR6150		KR6151	KR6152		KR6153		KR6154		
Sampling Date		2011/08/19		2011/08/19		2011/08/19		2011/08/19	2011/08/19		2011/08/19		2011/08/20		
	Units	**11-SED 4**	**RDL**	**11-SED 9**	**RDL**	**11-SED 8**	**RDL**	**11-SED 12**	**11-SED 11**	**RDL**	**11-SED 14**	**RDL**	**11-SED 10**	**RDL**	**QC Batch**
Inorganics															
Moisture	%	46	1	34	1	49	1	26	37	1	25	1	29	1	2596664
Organic Carbon (TOC)	g/kg	17	0.6	6.8	0.3	15	0.6	5.3	7.7	0.3	5.0	0.2	5.8	0.3	2601484

Maxxam ID		KR6155		KR6156		KR6157		KR6158		
Sampling Date		2011/08/20		2011/08/20		2011/08/20		2011/08/20		
	Units	**11-SED 13**	**RDL**	**11-SED 16**	**RDL**	**11-SED 39**	**QC Batch**	**11-SED 40**	**RDL**	**QC Batch**
Inorganics										
Moisture	%	38	1	33	1	22	2596664	20	1	2596664
Organic Carbon (TOC)	g/kg	7.4	0.4	6.9	0.5	3.0	2601484	3.3	0.2	2602987

Maxxam ID		KR6159		KR6160		KR6161		KR6162		
Sampling Date		2011/08/20		2011/08/20		2011/08/20		2011/08/20		
	Units	**11-SED 36**	**RDL**	**11-SED 33**	**RDL**	**11-SED 31**	**RDL**	**11-SED 38**	**RDL**	**QC Batch**
Inorganics										
Moisture	%	38	1	41	1	36	1	41	1	2596664
Organic Carbon (TOC)	g/kg	11	0.6	22	0.9	7.9	0.4	13	0.5	2602987

Maxxam ID		KR6163		KR6164		KR6165		KR6166	KR6167		
Sampling Date		2011/08/20		2011/08/19		2011/08/19		2011/08/19	2011/08/19		
	Units	**11-SED 42**	**RDL**	**11-SED 59**	**RDL**	**11-SED-DUP1**	**RDL**	**11-SED-DUP2**	**11-SED-DUP3**	**RDL**	**QC Batch**
Inorganics											
Moisture	%	41	1	35	1	72	1	38	48	1	2596664
Organic Carbon (TOC)	g/kg	26	1	6.8	0.4	24	0.5	7.3	14	0.4	2602987

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1D0971
Report Date: 2011/09/02

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

RESULTS OF ANALYSES OF SOIL

Maxxam ID		KR6231		
Sampling Date		2011/08/20		
	Units	**11-SED-DUP5**	**RDL**	**QC Batch**
Inorganics				
Moisture	%	35	1	2596664
Organic Carbon (TOC)	g/kg	6.2	0.4	2602987

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		KR6120	KR6121	KR6122	KR6123	KR6126	KR6127	KR6128	KR6128	KR6129	KR6130		
Sampling Date		2011/08/18	2011/08/18	2011/08/18	2011/08/18	2011/08/18	2011/08/18	2011/08/19	2011/08/19	2011/08/19	2011/08/19		
	Units	**11-SED 22**	**11-SED 21**	**11-SED 19**	**11-SED 18**	**11-SED 17**	**11-SED 20**	**11-SED 52**	**11-SED 52 Lab-Dup**	**11-SED 48**	**11-SED 44**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.24	0.33	0.22	0.22	0.11	0.17	<0.01	<0.01	<0.01	<0.01	0.01	2598620
Surrogate Recovery (%)													
Decachlorobiphenyl	%	89(1)	96(1)	105(1)	102(1)	97(1)	103(1)	101	111	102	121		2598620

Maxxam ID		KR6131	KR6132	KR6133	KR6134	KR6135	KR6136	KR6137	KR6138	KR6139	KR6141		
Sampling Date		2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19		
	Units	**11-SED 43**	**11-SED 26**	**11-SED 25**	**11-SED 24**	**11-SED 23**	**11-SED 15**	**11-SED 28**	**11-SED 27**	**11-SED 29**	**11-SED 35**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.04	0.23	0.04	0.05	0.16	0.46	<0.01	<0.01	<0.01	<0.01	0.01	2598620
Surrogate Recovery (%)													
Decachlorobiphenyl	%	104(1)	112(1)	102(1)	107(1)	124(1)	109(1)	117	106	104	111		2598620

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1260.

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Maxxam Job #: B1D0971
Report Date: 2011/09/02

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		KR6142		KR6143	KR6144	KR6145	KR6145	KR6146	KR6147	KR6148	KR6149		
Sampling Date		2011/08/19		2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19		
	Units	**11-SED 3**	**QC Batch**	**11-SED 2**	**11-SED 5**	**11-SED 6**	**11-SED 6 Lab-Dup**	**11-SED 7**	**11-SED 1**	**11-SED 4**	**11-SED 9**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.10	2598620	0.30	0.23	0.51	0.43	0.51	0.07	0.40	0.06	0.01	2599022
Surrogate Recovery (%)													
Decachlorobiphenyl	%	112	2598620	75(1)	76(1)	104(1)	80	75(1)	78(1)	75(1)	78(1)		2599022

Maxxam ID		KR6150	KR6151	KR6152	KR6153	KR6154	KR6155	KR6156	KR6157	KR6158	KR6159		
Sampling Date		2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/20	2011/08/20	2011/08/20	2011/08/20	2011/08/20	2011/08/20		
	Units	**11-SED 8**	**11-SED 12**	**11-SED 11**	**11-SED 14**	**11-SED 10**	**11-SED 13**	**11-SED 16**	**11-SED 39**	**11-SED 40**	**11-SED 36**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.25	0.15	0.26	0.56	0.06	0.16	0.08	0.06	<0.01	<0.01	0.01	2599022
Surrogate Recovery (%)													
Decachlorobiphenyl	%	83(1)	84(1)	98(1)	82(1)	86(1)	81(1)	81(1)	81(1)	85	88		2599022

Maxxam ID		KR6160	KR6161	KR6162		KR6163	KR6164		
Sampling Date		2011/08/20	2011/08/20	2011/08/20		2011/08/20	2011/08/19		
	Units	**11-SED 33**	**11-SED 31**	**11-SED 38**	**QC Batch**	**11-SED 42**	**11-SED 59**	**RDL**	**QC Batch**
PCBs									
Total PCB	mg/kg	<0.01	<0.01	<0.01	2599022	<0.01	<0.01	0.01	2600109
Surrogate Recovery (%)									
Decachlorobiphenyl	%	107	84	86	2599022	78	78		2600109

Maxxam ID		KR6164	KR6165	KR6166	KR6167	KR6231		
Sampling Date		2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/20		
	Units	**11-SED 59 Lab-Dup**	**11-SED-DUP1**	**11-SED-DUP2**	**11-SED-DUP3**	**11-SED-DUP5**	**RDL**	**QC Batch**
PCBs								
Total PCB	mg/kg	<0.01	0.11	0.11	0.43	0.08	0.01	2600109
Surrogate Recovery (%)								
Decachlorobiphenyl	%	77	81(1)	72(1)	71(1)	77(1)		2600109

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1260.

Maxxam Job #: B1D0971
Report Date: 2011/09/02

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
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Sampler Initials: DC

Package 1	16.9°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1D0971
Report Date: 2011/09/02

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2598620	Decachlorobiphenyl	2011/09/02	99	70 - 130	109	70 - 130	96	%				
2598620	Total PCB	2011/09/02	88	70 - 130	100	70 - 130	<0.01	mg/kg	NC	50		
2599022	Decachlorobiphenyl	2011/09/02	71	70 - 130	82	70 - 130	80	%				
2599022	Total PCB	2011/09/02	NC	70 - 130	88	70 - 130	<0.01	mg/kg	18.0	50		
2600109	Decachlorobiphenyl	2011/09/02	70	70 - 130	86	70 - 130	81	%				
2600109	Total PCB	2011/09/02	80	70 - 130	84	70 - 130	<0.01	mg/kg	NC	50		
2601479	Organic Carbon (TOC)	2011/09/01					<0.2	g/kg	2.1	35	98	75 - 125
2601484	Organic Carbon (TOC)	2011/09/01					<0.2	g/kg	4.7	35	96	75 - 125
2602987	Organic Carbon (TOC)	2011/09/02					<0.2	g/kg	NC	35	100	75 - 125

N/A = Not Applicable
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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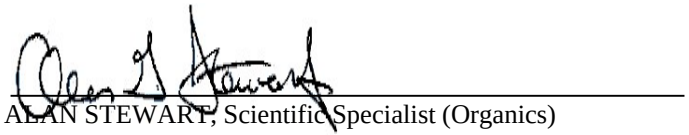
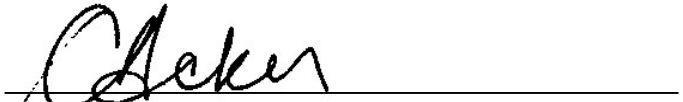
Validation Signature Page

Maxxam Job #: B1D0971

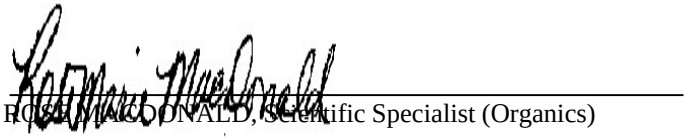
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



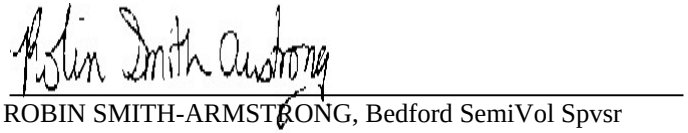
ALAN STEWART, Scientific Specialist (Organics)



COLLEEN ACKER,



ROBIN MACDONALD, Scientific Specialist (Organics)



ROBIN SMITH-ARMSTRONG, Bedford SemiVol Spvsr

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your C.O.C. #: ES333411

Attention: Jim Slade
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/09/21

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1D0971
Received: 2011/08/26, 9:42

Sample Matrix: Soil
Samples Received: 46

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Moisture	20	N/A	2011/08/26	ATL SOP 00001 R3	MOE Handbook 1983
Moisture	26	N/A	2011/08/27	ATL SOP 00001 R3	MOE Handbook 1983
PCB Congeners in Soil (1668A) (1,2)	2	2011/09/10	2011/09/12	BRL SOP-00408	EPA 1668A mod.
PCB Congeners in Soil (1668A) (1,2)	1	2011/09/10	2011/09/13	BRL SOP-00408	EPA 1668A mod.
PCB Congeners in Soil (1668A) (1,2)	1	2011/09/15	2011/09/19	BRL SOP-00408	EPA 1668A mod.
PCB/DDT in Soil by GC-ECD	40	2011/08/30	2011/09/02	ATL SOP 00106 R4	Based EPA8082
PCB/DDT in Soil by GC-ECD	6	2011/08/31	2011/09/02	ATL SOP 00106 R4	Based EPA8082
Total Organic Carbon in Soil	20	2011/08/31	2011/09/01	ATL SOP 00044 R4/00045 R4	LECO 203-601-224
Total Organic Carbon in Soil	15	2011/09/01	2011/09/01	ATL SOP 00044 R4/00045 R4	LECO 203-601-224
Total Organic Carbon in Soil	11	2011/09/02	2011/09/02	ATL SOP 00044 R4/00045 R4	LECO 203-601-224

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

(1) This test was performed by Maxxam Analytics Mississauga
(2) Soils are reported on a dry weight basis unless otherwise specified.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

==========

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Total cover pages: 1

Maxxam Job #: B1D0971
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

RESULTS OF ANALYSES OF SOIL

Maxxam ID		KR6120	KR6121		KR6122		KR6123	KR6126		KR6127		KR6128		
Sampling Date		2011/08/18	2011/08/18		2011/08/18		2011/08/18	2011/08/18		2011/08/18		2011/08/19		
	Units	**11-SED 22**	**11-SED 21**	**RDL**	**11-SED 19**	**RDL**	**11-SED 18**	**11-SED 17**	**RDL**	**11-SED 20**	**RDL**	**11-SED 52**	**RDL**	**QC Batch**
Inorganics														
Moisture	%	58	48	1	47	1	51	49	1	36	1	29	1	2596179
Organic Carbon (TOC)	g/kg	20	15	0.8	15	1	19	17	0.7	10	0.4	5.0	0.3	2601479

Maxxam ID		KR6129		KR6130		KR6131		KR6132		KR6133		KR6134		KR6135		
Sampling Date		2011/08/19		2011/08/19		2011/08/19		2011/08/19		2011/08/19		2011/08/19		2011/08/19		
	Units	**11-SED 48**	**RDL**	**11-SED 44**	**RDL**	**11-SED 43**	**RDL**	**11-SED 26**	**RDL**	**11-SED 25**	**RDL**	**11-SED 24**	**RDL**	**11-SED 23**	**RDL**	**QC Batch**
Inorganics																
Moisture	%	14	1	44	1	49	1	23	1	68	1	32	1	61	1	2596179
Organic Carbon (TOC)	g/kg	1.1	0.2	16	0.6	15	0.5	3.6	0.3	19	0.5	8.3	0.3	21	0.6	2601479

Maxxam ID		KR6136			KR6137		KR6137		KR6138		KR6139		KR6141		
Sampling Date		2011/08/19			2011/08/19		2011/08/19		2011/08/19		2011/08/19		2011/08/19		
	Units	**11-SED 15**	**RDL**	**QC Batch**	**11-SED 28**	**RDL**	**11-SED 28 Lab-Dup**	**RDL**	**11-SED 27**	**RDL**	**11-SED 29**	**RDL**	**11-SED 35**	**RDL**	**QC Batch**
Inorganics															
Moisture	%	39	1	2596179	44	1			45	1	18	1	31	1	2596179
Organic Carbon (TOC)	g/kg	9.4	0.3	2601479	14	0.7	13	0.8	13	0.7	5.4	0.5	7.4	0.9	2601484

Maxxam ID		KR6142			KR6143		KR6144		KR6145		KR6146		KR6147		
Sampling Date		2011/08/19			2011/08/19		2011/08/19		2011/08/19		2011/08/19		2011/08/19		
	Units	**11-SED 3**	**RDL**	**QC Batch**	**11-SED 2**	**RDL**	**11-SED 5**	**RDL**	**11-SED 6**	**RDL**	**11-SED 7**	**RDL**	**11-SED 1**	**RDL**	**QC Batch**
Inorganics															
Moisture	%	44	1	2596179	55	1	48	1	49	1	53	1	31	1	2596664
Organic Carbon (TOC)	g/kg	11	0.5	2601484	22	0.6	16	0.4	18	0.8	18	0.4	3.9	0.2	2601484

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1D0971
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

RESULTS OF ANALYSES OF SOIL

Maxxam ID		KR6148		KR6149		KR6150		KR6151	KR6152		KR6153		KR6154		
Sampling Date		2011/08/19		2011/08/19		2011/08/19		2011/08/19	2011/08/19		2011/08/19		2011/08/20		
	Units	**11-SED 4**	**RDL**	**11-SED 9**	**RDL**	**11-SED 8**	**RDL**	**11-SED 12**	**11-SED 11**	**RDL**	**11-SED 14**	**RDL**	**11-SED 10**	**RDL**	**QC Batch**
Inorganics															
Moisture	%	46	1	34	1	49	1	26	37	1	25	1	29	1	2596664
Organic Carbon (TOC)	g/kg	17	0.6	6.8	0.3	15	0.6	5.3	7.7	0.3	5.0	0.2	5.8	0.3	2601484

Maxxam ID		KR6155		KR6156		KR6157		KR6158		
Sampling Date		2011/08/20		2011/08/20		2011/08/20		2011/08/20		
	Units	**11-SED 13**	**RDL**	**11-SED 16**	**RDL**	**11-SED 39**	**QC Batch**	**11-SED 40**	**RDL**	**QC Batch**
Inorganics										
Moisture	%	38	1	33	1	22	2596664	20	1	2596664
Organic Carbon (TOC)	g/kg	7.4	0.4	6.9	0.5	3.0	2601484	3.3	0.2	2602987

Maxxam ID		KR6159		KR6160		KR6161		KR6162		
Sampling Date		2011/08/20		2011/08/20		2011/08/20		2011/08/20		
	Units	**11-SED 36**	**RDL**	**11-SED 33**	**RDL**	**11-SED 31**	**RDL**	**11-SED 38**	**RDL**	**QC Batch**
Inorganics										
Moisture	%	38	1	41	1	36	1	41	1	2596664
Organic Carbon (TOC)	g/kg	11	0.6	22	0.9	7.9	0.4	13	0.5	2602987

Maxxam ID		KR6163		KR6164		KR6165		KR6166	KR6167		
Sampling Date		2011/08/20		2011/08/19		2011/08/19		2011/08/19	2011/08/19		
	Units	**11-SED 42**	**RDL**	**11-SED 59**	**RDL**	**11-SED-DUP1**	**RDL**	**11-SED-DUP2**	**11-SED-DUP3**	**RDL**	**QC Batch**
Inorganics											
Moisture	%	41	1	35	1	72	1	38	48	1	2596664
Organic Carbon (TOC)	g/kg	26	1	6.8	0.4	24	0.5	7.3	14	0.4	2602987

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1D0971
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

RESULTS OF ANALYSES OF SOIL

Maxxam ID		KR6231		
Sampling Date		2011/08/20		
	Units	**11-SED-DUP5**	**RDL**	**QC Batch**
Inorganics				
Moisture	%	35	1	2596664
Organic Carbon (TOC)	g/kg	6.2	0.4	2602987

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		KR6120	KR6121	KR6122	KR6123	KR6126	KR6127	KR6128	KR6128	KR6129	KR6130		
Sampling Date		2011/08/18	2011/08/18	2011/08/18	2011/08/18	2011/08/18	2011/08/18	2011/08/19	2011/08/19	2011/08/19	2011/08/19		
	Units	**11-SED 22**	**11-SED 21**	**11-SED 19**	**11-SED 18**	**11-SED 17**	**11-SED 20**	**11-SED 52**	**11-SED 52 Lab-Dup**	**11-SED 48**	**11-SED 44**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.24	0.33	0.22	0.22	0.11	0.17	<0.01	<0.01	<0.01	<0.01	0.01	2598620
Surrogate Recovery (%)													
Decachlorobiphenyl	%	89(1)	96(1)	105(1)	102(1)	97(1)	103(1)	101	111	102	121		2598620

Maxxam ID		KR6131	KR6132	KR6133	KR6134	KR6135	KR6136	KR6137	KR6138	KR6139	KR6141		
Sampling Date		2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19		
	Units	**11-SED 43**	**11-SED 26**	**11-SED 25**	**11-SED 24**	**11-SED 23**	**11-SED 15**	**11-SED 28**	**11-SED 27**	**11-SED 29**	**11-SED 35**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.04	0.23	0.04	0.05	0.16	0.46	<0.01	<0.01	<0.01	<0.01	0.01	2598620
Surrogate Recovery (%)													
Decachlorobiphenyl	%	104(1)	112(1)	102(1)	107(1)	124(1)	109(1)	117	106	104	111		2598620

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1260.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1D0971
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		KR6142		KR6143	KR6144	KR6145	KR6145	KR6146	KR6147	KR6148	KR6149		
Sampling Date		2011/08/19		2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/19		
	Units	**11-SED 3**	**QC Batch**	**11-SED 2**	**11-SED 5**	**11-SED 6**	**11-SED 6 Lab-Dup**	**11-SED 7**	**11-SED 1**	**11-SED 4**	**11-SED 9**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.10	2598620	0.30	0.23	0.51	0.43	0.51	0.07	0.40	0.06	0.01	2599022
Surrogate Recovery (%)													
Decachlorobiphenyl	%	112	2598620	75(1)	76(1)	104(1)	80	75(1)	78(1)	75(1)	78(1)		2599022

Maxxam ID		KR6150	KR6151	KR6152	KR6153	KR6154	KR6155	KR6156	KR6157	KR6158	KR6159		
Sampling Date		2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/20	2011/08/20	2011/08/20	2011/08/20	2011/08/20	2011/08/20		
	Units	**11-SED 8**	**11-SED 12**	**11-SED 11**	**11-SED 14**	**11-SED 10**	**11-SED 13**	**11-SED 16**	**11-SED 39**	**11-SED 40**	**11-SED 36**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.25	0.15	0.26	0.56	0.06	0.16	0.08	0.06	<0.01	<0.01	0.01	2599022
Surrogate Recovery (%)													
Decachlorobiphenyl	%	83(1)	84(1)	98(1)	82(1)	86(1)	81(1)	81(1)	81(1)	85	88		2599022

Maxxam ID		KR6160	KR6161	KR6162		KR6163	KR6164		
Sampling Date		2011/08/20	2011/08/20	2011/08/20		2011/08/20	2011/08/19		
	Units	**11-SED 33**	**11-SED 31**	**11-SED 38**	**QC Batch**	**11-SED 42**	**11-SED 59**	**RDL**	**QC Batch**
PCBs									
Total PCB	mg/kg	<0.01	<0.01	<0.01	2599022	<0.01	<0.01	0.01	2600109
Surrogate Recovery (%)									
Decachlorobiphenyl	%	107	84	86	2599022	78	78		2600109

Maxxam ID		KR6164	KR6165	KR6166	KR6167	KR6231		
Sampling Date		2011/08/19	2011/08/19	2011/08/19	2011/08/19	2011/08/20		
	Units	**11-SED 59 Lab-Dup**	**11-SED-DUP1**	**11-SED-DUP2**	**11-SED-DUP3**	**11-SED-DUP5**	**RDL**	**QC Batch**
PCBs								
Total PCB	mg/kg	<0.01	0.11	0.11	0.43	0.08	0.01	2600109
Surrogate Recovery (%)								
Decachlorobiphenyl	%	77	81(1)	72(1)	71(1)	77(1)		2600109

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SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KR6127		KR6142		KR6146			KR6153		
Sampling Date		2011/08/18		2011/08/19		2011/08/19			2011/08/19		
	Units	**11-SED 20**	**RDL**	**11-SED 3**	**RDL**	**11-SED 7**	**RDL**	**QC Batch**	**11-SED 14**	**RDL**	**QC Batch**
PCBs											
2-MonoCB-(1)	ng/g	0.009	0.010	0.091	0.010	0.01	0.10	2610967	0.005	0.065	2618245
3-MonoCB-(2)	ng/g	0.001	0.010	0.007	0.010	0.00	0.10	2610967	<0.0010	0.065	2618245
4-MonoCB-(3)	ng/g	0.004	0.010	0.044	0.010	0.01	0.10	2610967	0.002	0.065	2618245
22'-DiCB-(4)	ng/g	0.004	0.010	0.022	0.010	<0.011	0.10	2610967	<0.0043	0.065	2618245
2,3-DiCB-(5)	ng/g	<0.00088	0.010	0.002	0.010	<0.0074	0.10	2610967	<0.0032	0.065	2618245
2,3'-DiCB-(6)	ng/g	0.002	0.010	0.015	0.010	<0.0070	0.10	2610967	<0.0025(1)	0.065	2618245
2,4-DiCB-(7)	ng/g	<0.00084	0.010	0.006	0.010	<0.0071	0.10	2610967	<0.0031	0.065	2618245
2,4'-DiCB-(8)	ng/g	0.009	0.010	0.048	0.010	0.01	0.10	2610967	0.009	0.065	2618245
2,5-DiCB-(9)	ng/g	<0.00073(1)	0.010	0.006	0.010	<0.0069	0.10	2610967	<0.0030	0.065	2618245
2,6-DiCB-(10)	ng/g	<0.00061	0.010	0.003	0.010	<0.012	0.10	2610967	<0.0049	0.065	2618245
3,3'-DiCB-(11)	ng/g	0.008	0.010	0.016	0.010	0.01	0.10	2610967	0.031	0.065	2618245
DiCB-(12)+(13)	ng/g	<0.00082	0.020	0.008	0.020	<0.0070	0.20	2610967	<0.0031	0.13	2618245
3,5-DiCB-(14)	ng/g	<0.00074	0.010	<0.00071	0.010	<0.0066	0.10	2610967	<0.0030	0.065	2618245
4,4'-DiCB-(15)	ng/g	0.009	0.010	0.024	0.010	<0.015(1)	0.10	2610967	0.011	0.065	2618245
22'3-TriCB-(16)	ng/g	0.001	0.010	0.004	0.010	<0.0040	0.10	2610967	<0.0032	0.065	2618245
22'4-TriCB-(17)	ng/g	0.002	0.010	0.006	0.010	<0.0056(1)	0.10	2610967	<0.0046(1)	0.065	2618245
TriCB-(18)+(30)	ng/g	0.003	0.020	0.009	0.020	0.01	0.20	2610967	<0.0092(1)	0.13	2618245
22'6-TriCB-(19)	ng/g	0.001	0.010	0.001	0.010	<0.0031	0.10	2610967	<0.0027	0.065	2618245
TriCB-(20) + (28)	ng/g	0.008	0.020	0.022	0.020	0.03	0.20	2610967	0.02	0.13	2618245
TriCB-(21)+(33)	ng/g	0.006	0.020	0.011	0.020	<0.011(1)	0.20	2610967	0.01	0.13	2618245
234'-TriCB-(22)	ng/g	0.002	0.010	0.007	0.010	<0.0067(1)	0.10	2610967	<0.0048(1)	0.065	2618245
235-TriCB-(23)	ng/g	<0.00014	0.010	<0.00023	0.010	<0.0032	0.10	2610967	<0.00095	0.065	2618245
236-TriCB-(24)	ng/g	<0.00015	0.010	<0.00041	0.010	<0.0028	0.10	2610967	<0.0026	0.065	2618245
23'4-TriCB-(25)	ng/g	0.001	0.010	0.002	0.010	<0.0028	0.10	2610967	0.001	0.065	2618245
TriCB-(26)+(29)	ng/g	0.003	0.020	0.004	0.020	0.00	0.20	2610967	0.00	0.13	2618245
23'6-TriCB-(27)	ng/g	<0.00061(1)	0.010	<0.00088(1)	0.010	<0.0025	0.10	2610967	<0.0023	0.065	2618245
24'5-TriCB-(31)	ng/g	<0.0045(1)	0.010	0.014	0.010	0.02	0.10	2610967	0.012	0.065	2618245
24'6-TriCB-(32)	ng/g	0.001	0.010	0.003	0.010	<0.0024	0.10	2610967	<0.0034(1)	0.065	2618245
23'5'-TriCB-(34)	ng/g	<0.00013	0.010	<0.00021	0.010	<0.0030	0.10	2610967	<0.00089	0.065	2618245
33'4-TriCB-(35)	ng/g	0.001	0.010	0.001	0.010	<0.0030	0.10	2610967	<0.0025(1)	0.065	2618245
33'5-TriCB-(36)	ng/g	0.000	0.010	<0.00035(1)	0.010	<0.0027	0.10	2610967	<0.00080	0.065	2618245
344'-TriCB-(37)	ng/g	0.003	0.010	0.007	0.010	0.01	0.10	2610967	0.009	0.065	2618245
345-TriCB-(38)	ng/g	<0.00013	0.010	<0.00021	0.010	<0.0031	0.10	2610967	<0.00091	0.065	2618245

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SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KR6127		KR6142		KR6146			KR6153		
Sampling Date		2011/08/18		2011/08/19		2011/08/19			2011/08/19		
	Units	**11-SED 20**	**RDL**	**11-SED 3**	**RDL**	**11-SED 7**	**RDL**	**QC Batch**	**11-SED 14**	**RDL**	**QC Batch**
34'5-TriCB-(39)	ng/g	0.000	0.010	<0.00020	0.010	<0.0029	0.10	2610967	<0.00087	0.065	2618245
TetraCB-(40)+(41)+(71)	ng/g	0.011	0.030	0.022	0.030	0.03	0.30	2610967	0.03	0.20	2618245
22'34'-TetraCB-(42)	ng/g	0.005	0.010	0.013	0.010	0.01	0.10	2610967	0.007	0.065	2618245
22'35-TetraCB-(43)	ng/g	<0.00042	0.010	<0.00074(1)	0.010	<0.0045	0.10	2610967	<0.0012	0.065	2618245
TetraCB-(44)+(47)+(65)	ng/g	0.027	0.030	0.070	0.030	0.07	0.30	2610967	0.05	0.20	2618245
TetraCB-(45)+(51)	ng/g	0.002	0.020	0.004	0.020	0.01	0.20	2610967	0.00	0.13	2618245
22'36'-TetraCB-(46)	ng/g	0.001	0.010	0.001	0.010	<0.0050	0.10	2610967	<0.0010(1)	0.065	2618245
22'45-TetraCB-(48)	ng/g	0.002	0.010	0.005	0.010	0.01	0.10	2610967	<0.0033(1)	0.065	2618245
TetraCB-(49)+TetraCB-(69)	ng/g	0.045	0.020	0.058	0.020	0.08	0.20	2610967	0.04	0.13	2618245
TetraCB-(50)+(53)	ng/g	0.002	0.020	0.005	0.020	<0.0066(1)	0.20	2610967	0.01	0.13	2618245
22'55'-TetraCB-(52)	ng/g	0.108	0.010	0.179	0.010	0.19	0.10	2610967	0.203	0.065	2618245
22'66'-TetraCB-(54)	ng/g	<0.00012	0.010	<0.00015	0.010	<0.0019	0.10	2610967	<0.00073	0.065	2618245
233'4-TetraCB-(55)	ng/g	<0.00026(1)	0.010	0.001	0.010	<0.0019	0.10	2610967	<0.00090	0.065	2618245
233'4'-Tetra CB(56)	ng/g	0.012	0.010	0.025	0.010	0.03	0.10	2610967	0.019	0.065	2618245
233'5-TetraCB-(57)	ng/g	<0.00013	0.010	<0.000095	0.010	<0.0018	0.10	2610967	<0.00086	0.065	2618245
233'5'-TetraCB-(58)	ng/g	0.032	0.010	0.017	0.010	0.09	0.10	2610967	0.149	0.065	2618245
TetraCB-(59)+(62)+(75)	ng/g	0.002	0.030	0.003	0.030	0.00	0.30	2610967	0.00	0.20	2618245
2344'-TetraCB -(60)	ng/g	0.005	0.010	0.013	0.010	0.02	0.10	2610967	0.009	0.065	2618245
TetraCB-(61)+(70)+(74)+(76)	ng/g	0.077	0.040	0.203	0.040	0.20	0.40	2610967	0.12	0.26	2618245
234'5-TetraCB-(63)	ng/g	<0.00070(1)	0.010	0.002	0.010	<0.0018	0.10	2610967	0.001	0.065	2618245
234'6-TetraCB-(64)	ng/g	0.010	0.010	0.029	0.010	0.03	0.10	2610967	0.018	0.065	2618245
23'44'-TetraCB-(66)	ng/g	0.044	0.010	0.086	0.010	0.12	0.10	2610967	0.070	0.065	2618245
23'45-TetraCB-(67)	ng/g	0.005	0.010	0.002	0.010	<0.0017	0.10	2610967	0.002	0.065	2618245
23'45'-TetraCB-(68)	ng/g	<0.00066(1)	0.010	0.001	0.010	<0.0017	0.10	2610967	<0.0012(1)	0.065	2618245
23'55'-TetraCB-(72)	ng/g	0.003	0.010	0.001	0.010	<0.0023(1)	0.10	2610967	0.002	0.065	2618245
23'5'6-TetraCB-(73)	ng/g	<0.00034	0.010	<0.00020	0.010	<0.0033	0.10	2610967	<0.00083	0.065	2618245
33'44'-TetraCB-(77)	ng/g	0.038	0.010	0.019	0.010	0.06	0.10	2610967	0.098	0.065	2618245
33'45-TetraCB-(78)	ng/g	<0.00013	0.010	<0.000096	0.010	<0.0019	0.10	2610967	<0.00087	0.065	2618245
33'45'-TetraCB(79)	ng/g	<0.0085(1)	0.010	0.004	0.010	0.01	0.10	2610967	0.018	0.065	2618245
33'55'-TetraCB-(80)	ng/g	<0.00011	0.010	<0.000085	0.010	<0.0017	0.10	2610967	0.022	0.065	2618245
344'5-TetraCB-(81)	ng/g	<0.0016(1)	0.010	0.000	0.010	0.00	0.10	2610967	<0.0010	0.065	2618245
22'33'4-PentaCB-(82)	ng/g	0.034	0.010	0.083	0.010	0.10	0.10	2610967	0.074	0.065	2618245
PentaCB-(83)+(99)	ng/g	0.727	0.020	0.532	0.020	1.45	0.20	2610967	0.98	0.13	2618245
22'33'6-PentaCB-(84)	ng/g	0.099	0.010	0.173	0.010	0.28	0.10	2610967	0.327	0.065	2618245

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SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KR6127		KR6142		KR6146			KR6153		
Sampling Date		2011/08/18		2011/08/19		2011/08/19			2011/08/19		
	Units	**11-SED 20**	**RDL**	**11-SED 3**	**RDL**	**11-SED 7**	**RDL**	**QC Batch**	**11-SED 14**	**RDL**	**QC Batch**
PentaCB-(85)+(116)+(117)	ng/g	0.064	0.030	0.125	0.030	0.14	0.30	2610967	0.10	0.20	2618245
PentaCB-(86)(87)(97)(109)(119)(125)	ng/g	0.454	0.060	0.555	0.060	0.89	0.60	2610967	1.21	0.39	2618245
PentaCB-(88)+(91)	ng/g	0.063	0.020	0.083	0.020	0.12	0.20	2610967	0.10	0.13	2618245
22'346'-PentaCB-(89)	ng/g	0.003	0.010	0.004	0.010	<0.0073(1)	0.10	2610967	<0.0077(1)	0.065	2618245
PentaCB-(90)+(101)+(113)	ng/g	2.88	0.030	1.44	0.030	4.36	0.30	2610967	8.79	0.20	2618245
22'355'-PentaCB-(92)	ng/g	0.352	0.010	0.206	0.010	0.54	0.10	2610967	<0.0015	0.065	2618245
PentaCB-(93)+(98)+(100)+(102)	ng/g	0.018	0.040	0.016	0.040	0.04	0.40	2610967	0.04	0.26	2618245
22'356'-PentaCB-(94)	ng/g	0.002	0.010	<0.0014(1)	0.010	<0.0033	0.10	2610967	<0.0034(1)	0.065	2618245
22'35'6-PentaCB-(95)	ng/g	1.50	0.010	0.856	0.010	3.21	0.10	2610967	6.75	0.065	2618245
22'366'-PentaCB-(96)	ng/g	0.002	0.010	0.002	0.010	0.00	0.10	2610967	0.005	0.065	2618245
22'45'6-PentaCB-(103)	ng/g	0.036	0.010	0.008	0.010	0.04	0.10	2610967	0.042	0.065	2618245
22'466'-PentaCB-(104)	ng/g	<0.000084(1)	0.010	<0.00011	0.010	<0.0021	0.10	2610967	<0.00050(1)	0.065	2618245
233'44'-PentaCB-(105)	ng/g	0.252	0.010	0.397	0.010	0.63	0.10	2610967	0.575	0.065	2618245
233'45-PentaCB-(106)	ng/g	<0.00019	0.010	<0.00023	0.010	<0.0038	0.10	2610967	<0.0011	0.065	2618245
233'4'5-PentaCB-(107)	ng/g	0.144	0.010	0.073	0.010	0.17	0.10	2610967	0.218	0.065	2618245
PentaCB-(108)+(124)	ng/g	0.035	0.020	0.032	0.020	0.06	0.20	2610967	0.09	0.13	2618245
PentaCB-(110)+(115)	ng/g	1.28	0.020	1.18	0.020	2.68	0.20	2610967	4.29	0.13	2618245
233'55'-PentaCB-(111)	ng/g	0.004	0.010	<0.00017	0.010	<0.0030(1)	0.10	2610967	0.006	0.065	2618245
233'56-PentaCB-(112)	ng/g	<0.00021	0.010	<0.00017	0.010	<0.0023	0.10	2610967	<0.0012	0.065	2618245
2344'5-PentaCB-(114)	ng/g	0.010	0.010	0.014	0.010	0.02	0.10	2610967	0.030	0.065	2618245
23'44'5-PentaCB-(118)	ng/g	1.04	0.010	1.06	0.010	2.11	0.10	2610967	2.59	0.065	2618245
23'455'-PentaCB-(120)	ng/g	0.023	0.010	0.006	0.010	0.03	0.10	2610967	0.041	0.065	2618245
23'45'6-PentaCB-(121)	ng/g	<0.00020	0.010	<0.00016	0.010	<0.0022	0.10	2610967	<0.0011	0.065	2618245
233'4'5'-PentaCB-(122)	ng/g	0.005	0.010	0.008	0.010	0.01	0.10	2610967	0.014	0.065	2618245
23'44'5'-PentaCB-(123)	ng/g	<0.00020	0.010	0.008	0.010	0.01	0.10	2610967	0.009	0.065	2618245
33'44'5-PentaCB-(126)	ng/g	0.114	0.010	0.028	0.010	0.15	0.10	2610967	0.288	0.065	2618245
33'455'-PentaCB-(127)	ng/g	<0.0018(1)	0.010	<0.00023	0.010	<0.0047(1)	0.10	2610967	0.008	0.065	2618245
HexaCB-(128)+(166)	ng/g	1.37	0.020	0.622	0.020	2.28	0.20	2610967	4.19	0.13	2618245
HexaCB-(129)+(138)+(163)	ng/g	16.6	0.030	6.13	0.030	29.2	0.30	2610967	54.5	0.20	2618245
22'33'45'-HexaCB-(130)	ng/g	0.700	0.010	0.264	0.010	1.11	0.10	2610967	2.15	0.065	2618245
22'33'46-HexaCB-(131)	ng/g	0.083	0.010	0.037	0.010	0.13	0.10	2610967	0.249	0.065	2618245
22'33'46'-HexaCB-(132)	ng/g	3.88	0.010	1.63	0.010	7.51	0.10	2610967	14.8	0.065	2618245
22'33'55'-HexaCB-(133)	ng/g	0.205	0.010	0.068	0.010	0.34	0.10	2610967	0.666	0.065	2618245
HexaCB-(134)+(143)	ng/g	0.458	0.020	0.197	0.020	0.86	0.20	2610967	1.69	0.13	2618245

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Your P.O. #: 16400NR
Sampler Initials: DC

SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KR6127		KR6142		KR6146			KR6153		
Sampling Date		2011/08/18		2011/08/19		2011/08/19			2011/08/19		
	Units	**11-SED 20**	**RDL**	**11-SED 3**	**RDL**	**11-SED 7**	**RDL**	**QC Batch**	**11-SED 14**	**RDL**	**QC Batch**
HexaCB-(135)+(151)	ng/g	6.08	0.020	2.13	0.020	10.8	0.20	2610967	25.6	0.13	2618245
22'33'66'-HexaCB-(136)	ng/g	1.59	0.010	0.550	0.010	2.89	0.10	2610967	6.81	0.065	2618245
22'344'5-HexaCB-(137)	ng/g	<0.0013	0.010	0.045	0.010	0.09	0.10	2610967	0.122	0.065	2618245
HexaCB-(139)+(140)	ng/g	0.073	0.020	0.030	0.020	0.10	0.20	2610967	0.18	0.13	2618245
22'3455'-HexaCB-(141)	ng/g	1.62	0.010	0.926	0.010	3.54	0.10	2610967	11.5	0.065	2618245
22'3456-HexaCB-(142)	ng/g	<0.0014	0.010	<0.0013	0.010	<0.015	0.10	2610967	<0.0058	0.065	2618245
22'345'6-HexaCB-(144)	ng/g	0.905(1)	0.010	0.310(1)	0.010	1.12	0.10	2610967	3.24	0.065	2618245
22'3466'-HexaCB-(145)	ng/g	<0.000093	0.010	<0.00027(2)	0.010	<0.0070	0.10	2610967	<0.00079	0.065	2618245
22'34'55'-HexaCB-(146)	ng/g	2.82	0.010	0.889	0.010	4.75	0.10	2610967	9.27	0.065	2618245
HexaCB-(147)+(149)	ng/g	12.8	0.020	4.58	0.020	23.2	0.20	2610967	50.7	0.13	2618245
22'34'56'-HexaCB-(148)	ng/g	0.014	0.010	0.004	0.010	0.02	0.10	2610967	0.036	0.065	2618245
22'34'66'-HexaCB-(150)	ng/g	0.021	0.010	0.005	0.010	0.04	0.10	2610967	0.058	0.065	2618245
22'3566'-HexaCB-(152)	ng/g	<0.00091(2)	0.010	0.001	0.010	<0.0063	0.10	2610967	<0.00073	0.065	2618245
HexaCB-(153)+(168)	ng/g	20.0(3)	0.20	6.05	0.020	30.9	0.20	2610967	60.3	0.13	2618245
22'44'56'-HexaCB-(154)	ng/g	0.145	0.010	0.034	0.010	0.18	0.10	2610967	0.319	0.065	2618245
22'44'66'-HexaCB-(155)	ng/g	<0.000072	0.010	<0.00017(2)	0.010	<0.0057	0.10	2610967	<0.00055	0.065	2618245
HexaCB-(156)+(157)	ng/g	0.655	0.020	0.336	0.020	1.05	0.20	2610967	2.09	0.13	2618245
233'44'6-HexaCB-(158)	ng/g	1.20	0.010	0.469	0.010	1.97	0.10	2610967	3.72	0.065	2618245
233'455'-HexaCB-(159)	ng/g	0.223	0.010	0.083	0.010	0.46	0.10	2610967	0.744	0.065	2618245
233'456-HexaCB-(160)	ng/g	<0.0010	0.010	<0.00098	0.010	<0.011	0.10	2610967	<0.0041	0.065	2618245
233'45'6-HexaCB-(161)	ng/g	<0.00095	0.010	<0.00090	0.010	<0.0096	0.10	2610967	<0.0039	0.065	2618245
233'4'55'-HexaCB-(162)	ng/g	0.042	0.010	0.014	0.010	0.05	0.10	2610967	0.132	0.065	2618245
233'4'5'6-HexaCB-(164)	ng/g	0.963	0.010	0.396	0.010	1.76	0.10	2610967	3.87	0.065	2618245
233'55'6-HexaCB-(165)	ng/g	<0.0010	0.010	<0.00097	0.010	0.08	0.10	2610967	<0.0043	0.065	2618245
23'44'55'-HexaCB-(167)	ng/g	0.469	0.010	0.179	0.010	0.73	0.10	2610967	1.52	0.065	2618245
33'44'55'-HexaCB-(169)	ng/g	0.039	0.010	0.011	0.010	0.05	0.10	2610967	0.103	0.065	2618245
22'33'44'5-HeptaCB-(170)	ng/g	8.21	0.010	2.97	0.010	14.2	0.10	2610967	27.3	0.065	2618245
HeptaCB-(171)+(173)	ng/g	2.62	0.020	0.922	0.020	4.48	0.20	2610967	7.74	0.13	2618245
22'33'455'-HeptaCB-(172)	ng/g	1.31	0.010	0.508	0.010	2.34	0.10	2610967	4.80	0.065	2618245
22'33'456'-HeptaCB-(174)	ng/g	6.95	0.010	2.84	0.010	15.0	0.10	2610967	27.7	0.065	2618245
22'33'45'6-HeptaCB-(175)	ng/g	0.341	0.010	0.117	0.010	0.61	0.10	2610967	1.13	0.065	2618245
22'33'466'-HeptaCB-(176)	ng/g	1.01	0.010	0.341	0.010	1.76	0.10	2610967	3.33	0.065	2618245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Partially shifted outside window due to matrix effects.
(2) - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.
(3) - Results from 10x dilution.

Maxxam Job #: B1D0971
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KR6127		KR6142		KR6146			KR6153		
Sampling Date		2011/08/18		2011/08/19		2011/08/19			2011/08/19		
	Units	**11-SED 20**	**RDL**	**11-SED 3**	**RDL**	**11-SED 7**	**RDL**	**QC Batch**	**11-SED 14**	**RDL**	**QC Batch**
22'33'45'6'-HeptaCB-(177)	ng/g	5.93	0.010	2.09	0.010	10.7	0.10	2610967	17.8	0.065	2618245
22'33'55'6-HeptaCB-(178)	ng/g	1.94	0.010	0.635	0.010	3.42	0.10	2610967	5.86	0.065	2618245
22'33'566'-HeptaCB-(179)	ng/g	3.30	0.010	1.00	0.010	5.67	0.10	2610967	11.1	0.065	2618245
HeptaCB-(180)+(193)	ng/g	15.5(1)	0.20	5.63	0.020	23.1	0.20	2610967	53.4	0.13	2618245
22'344'56-HeptaCB-(181)	ng/g	0.012	0.010	0.006	0.010	0.02	0.10	2610967	0.042	0.065	2618245
22'344'56'-HeptaCB-(182)	ng/g	0.027	0.010	0.008	0.010	0.03	0.10	2610967	0.073	0.065	2618245
22'344'5'6-HeptaCB-(183)	ng/g	4.63	0.010	1.68	0.010	7.95	0.10	2610967	15.1	0.065	2618245
22'344'66'-HeptaCB-(184)	ng/g	0.006	0.010	<0.0026(2)	0.010	0.01	0.10	2610967	0.014	0.065	2618245
22'3455'6-HeptaCB-(185)	ng/g	0.366	0.010	0.158	0.010	0.80	0.10	2610967	1.61	0.065	2618245
22'34566'-HeptaCB-(186)	ng/g	<0.000067	0.010	<0.00017	0.010	<0.0058	0.10	2610967	<0.00032	0.065	2618245
22'34'55'6-HeptaCB-(187)	ng/g	12.1	0.010	3.91	0.010	21.7	0.10	2610967	35.7	0.065	2618245
22'34'566'-HeptaCB-(188)	ng/g	0.013	0.010	0.003	0.010	0.02	0.10	2610967	0.033	0.065	2618245
233'44'55'-HeptaCB-(189)	ng/g	0.256	0.010	0.088	0.010	0.42	0.10	2610967	0.793	0.065	2618245
233'44'56-HeptaCB-(190)	ng/g	1.39	0.010	0.534	0.010	2.70	0.10	2610967	4.58	0.065	2618245
233'44'5'6-HeptaCB-(191)	ng/g	0.263	0.010	0.099	0.010	0.46	0.10	2610967	0.849	0.065	2618245
233'455'6-HeptaCB-(192)	ng/g	<0.00085	0.010	<0.00033	0.010	<0.0090	0.10	2610967	<0.0029	0.065	2618245
22'33'44'55'-OctaCB-(194)	ng/g	4.49	0.010	1.38	0.010	7.18	0.10	2610967	13.1	0.065	2618245
22'33'44'56-OctaCB-(195)	ng/g	1.95	0.010	0.601	0.010	3.04	0.10	2610967	5.15	0.065	2618245
22'33'44'56'-OctaCB-(196)	ng/g	2.23	0.010	0.740	0.010	3.57	0.10	2610967	6.81	0.065	2618245
22'33'44'66'OctaCB-(197)	ng/g	<0.14(2)	0.010	0.047	0.010	0.21	0.10	2610967	0.494	0.065	2618245
OctaCB-(198)+(199)	ng/g	4.86	0.020	1.66	0.020	8.15	0.20	2610967	13.9	0.13	2618245
22'33'4566'-OctaCB-(200)	ng/g	0.484	0.010	0.179	0.010	0.88	0.10	2610967	1.34	0.065	2618245
22'33'45'66'-OctaCB-(201)	ng/g	0.577	0.010	0.190	0.010	0.86	0.10	2610967	1.64	0.065	2618245
22'33'55'66'-OctaCB-(202)	ng/g	0.880	0.010	0.267	0.010	1.35	0.10	2610967	2.30	0.065	2618245
22'344'55'6-OctaCB-(203)	ng/g	2.51	0.010	0.834	0.010	4.14	0.10	2610967	7.32	0.065	2618245
22'344'566'-OctaCB-(204)	ng/g	0.001	0.010	<0.00017(2)	0.010	<0.0048	0.10	2610967	<0.00087	0.065	2618245
233'44'55'6-OctaCB-(205)	ng/g	0.188	0.010	0.060	0.010	0.31	0.10	2610967	0.560	0.065	2618245
22'33'44'55'6-NonaCB-(206)	ng/g	0.657	0.010	0.239	0.010	1.13	0.10	2610967	2.03	0.065	2618245
22'33'44'566'-NonaCB-(207)	ng/g	0.096	0.010	0.033	0.010	0.16	0.10	2610967	0.287	0.065	2618245
22'33'455'66'-NonaCB-(208)	ng/g	0.116	0.010	0.047	0.010	0.22	0.10	2610967	0.324	0.065	2618245
DecaCB-(209)	ng/g	0.064	0.010	0.066	0.010	0.18	0.10	2610967	<0.038(2)	0.065	2618245
Total PCB	ng/g	168	N/A	63.9	N/A	290	N/A	2610967	560	N/A	2618245

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Results from 10x dilution.
(2) - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Maxxam Job #: B1D0971
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Stantec Consulting Ltd
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SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KR6127		KR6142		KR6146			KR6153		
Sampling Date		2011/08/18		2011/08/19		2011/08/19			2011/08/19		
	Units	**11-SED 20**	**RDL**	**11-SED 3**	**RDL**	**11-SED 7**	**RDL**	**QC Batch**	**11-SED 14**	**RDL**	**QC Batch**
Surrogate Recovery (%)											
C13-2,44'-TriCB-(28)	%	77		79		78		2610967	98		2618245
C13-22'33'44'55'6-NonaCB-(206)	%	111		115		111		2610967	112		2618245
C13-22'33'44'5-HeptaCB-(170)	%	101		111		91		2610967	108		2618245
C13-22'33'455'66'-NonaCB-(208)	%	125		132		105		2610967	121		2618245
C13-22'33'55'66'-OctaCB-(202)	%	108		124		103		2610967	114		2618245
C13-22'33'55'6-HeptaCB-(178)	%	122		123		123		2610967	117		2618245
C13-22'344'55'-HeptaCB-(180)	%	102		115		95		2610967	112		2618245
C13-22'34'566'-HeptaCB-(188)	%	122		122		120		2610967	119		2618245
C13-22'44'66'-HexaCB-(155)	%	125		138		130		2610967	115		2618245
C13-22'466'-PentaCB-(104)	%	93		108		103		2610967	102		2618245
C13-22'66'-TetraCB-(54)	%	104		112		106		2610967	96		2618245
C13-22'6-TriCB-(19)	%	95		103		85		2610967	83		2618245
C13-22'-DiCB-(4)	%	104		106		93		2610967	83		2618245
C13-233'44'55'6-OctaCB-(205)	%	99		103		95		2610967	105		2618245
C13-233'44'55'-HeptaCB-(189)	%	95		97		82		2610967	105		2618245
C13-233'44'-PentaCB-(105)	%	84		85		75		2610967	105		2618245
C13-233'55'-PentaCB-(111)	%	96		96		92		2610967	100		2618245
C13-23'44'55'-HexaCB-(167)	%	96		102		95		2610967	114		2618245
C13-2344'5-PentaCB-(114)	%	86		83		76		2610967	104		2618245
C13-23'44'5-PentaCB-(118)	%	84		83		79		2610967	107		2618245
C13-2'344'5-PentaCB-(123)	%	83		84		76		2610967	105		2618245
C13-2-MonoCB-(1)	%	86		76		69		2610967	63		2618245
C13-33'44'55'-HexaCB-(169)	%	95		94		99		2610967	79		2618245
C13-33'44'5-PentaCB-(126)	%	84		81		76		2610967	100		2618245
C13-33'44'-TetraCB-(77)	%	103		92		82		2610967	116		2618245
C13-344'5-TetraCB-(81)	%	100		93		84		2610967	112		2618245
C13-344'-TriCB-(37)	%	86		86		80		2610967	109		2618245
C13-44'-DiCB-(15)	%	86		94		84		2610967	98		2618245
C13-4-MonoCB-(3)	%	77		69		71		2610967	71		2618245
C13-DecaCB-(209)	%	117		131		122		2610967	117		2618245
C13-HexaCB-(156)+(157)	%	97		105		95		2610967	112		2618245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1D0971
Report Date: 2011/09/21

Stantec Consulting Ltd
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Package 1	16.9°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Sample KR6146-01: Sample results are from 10x dilution.

Sample KR6153-01: Very high pcb levels. Requires re-extraction.

SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

PCB Congeners in Soil (1668A): Samples required dilution due to high pcbs and matrix effects, causing peak shifting.

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Stantec Consulting Ltd
Client Project #: 121411777.210
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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2598620	Decachlorobiphenyl	2011/09/02	99	70 - 130	109	70 - 130	96	%				
2598620	Total PCB	2011/09/02	88	70 - 130	100	70 - 130	<0.01	mg/kg	NC	50		
2599022	Decachlorobiphenyl	2011/09/02	71	70 - 130	82	70 - 130	80	%				
2599022	Total PCB	2011/09/02	NC	70 - 130	88	70 - 130	<0.01	mg/kg	18.0	50		
2600109	Decachlorobiphenyl	2011/09/02	70	70 - 130	86	70 - 130	81	%				
2600109	Total PCB	2011/09/02	80	70 - 130	84	70 - 130	<0.01	mg/kg	NC	50		
2601479	Organic Carbon (TOC)	2011/09/01					<0.2	g/kg	2.1	35	98	75 - 125
2601484	Organic Carbon (TOC)	2011/09/01					<0.2	g/kg	4.7	35	96	75 - 125
2602987	Organic Carbon (TOC)	2011/09/02					<0.2	g/kg	NC	35	100	75 - 125
2610967	C13-2,44'-TriCB-(28)	2011/09/12			93	30 - 135	85	%				
2610967	C13-22'33'44'55'6-NonaCB-(206)	2011/09/12			118	25 - 150	105	%				
2610967	C13-22'33'44'5-HeptaCB-(170)	2011/09/12			103	25 - 150	94	%				
2610967	C13-22'33'455'66'-NonaCB-(208)	2011/09/12			130	25 - 150	114	%				
2610967	C13-22'33'55'66'-OctaCB-(202)	2011/09/12			122	25 - 150	107	%				
2610967	C13-22'33'55'6-HeptaCB-(178)	2011/09/12			142 (1)	30 - 135	118	%				
2610967	C13-22'344'55'-HeptaCB-(180)	2011/09/12			106	30 - 135	96	%				
2610967	C13-22'34'566'-HeptaCB-(188)	2011/09/12			136	25 - 150	116	%				
2610967	C13-22'44'66'-HexaCB-(155)	2011/09/12			135	25 - 150	128	%				
2610967	C13-22'466'-PentaCB-(104)	2011/09/12			98	25 - 150	101	%				
2610967	C13-22'66'-TetraCB-(54)	2011/09/12			105	25 - 150	108	%				
2610967	C13-22'6-TriCB-(19)	2011/09/12			90	25 - 150	84	%				
2610967	C13-22'-DiCB-(4)	2011/09/12			93	25 - 150	86	%				
2610967	C13-233'44'55'6-OctaCB-(205)	2011/09/12			110	25 - 150	95	%				
2610967	C13-233'44'55'-HeptaCB-(189)	2011/09/12			93	25 - 150	90	%				
2610967	C13-233'44'-PentaCB-(105)	2011/09/12			93	25 - 150	74	%				
2610967	C13-233'55'-PentaCB-(111)	2011/09/12			108	30 - 135	92	%				
2610967	C13-23'44'55'-HexaCB-(167)	2011/09/12			104	25 - 150	95	%				
2610967	C13-2344'5-PentaCB-(114)	2011/09/12			92	25 - 150	75	%				
2610967	C13-23'44'5-PentaCB-(118)	2011/09/12			95	25 - 150	77	%				
2610967	C13-2'344'5-PentaCB-(123)	2011/09/12			94	25 - 150	77	%				
2610967	C13-2-MonoCB-(1)	2011/09/12			61	15 - 150	59	%				
2610967	C13-33'44'55'-HexaCB-(169)	2011/09/12			94	25 - 150	81	%				
2610967	C13-33'44'5-PentaCB-(126)	2011/09/12			95	25 - 150	77	%				
2610967	C13-33'44'-TetraCB-(77)	2011/09/12			114	25 - 150	85	%				
2610967	C13-344'5-TetraCB-(81)	2011/09/12			114	25 - 150	84	%				
2610967	C13-344'-TriCB-(37)	2011/09/12			101	25 - 150	80	%				
2610967	C13-44'-DiCB-(15)	2011/09/12			98	25 - 150	82	%				
2610967	C13-4-MonoCB-(3)	2011/09/12			57	15 - 150	63	%				
2610967	C13-DecaCB-(209)	2011/09/12			142	25 - 150	120	%				

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Maxxam Job #: B1D0971
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE-GRAB SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: DC

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2610967	C13-HexaCB-(156)+(157)	2011/09/12			107	25 - 150	95	%				
2610967	2-MonoCB-(1)	2011/09/12			87	50 - 150	0.000, RDL=0.010	ng/g				
2610967	4-MonoCB-(3)	2011/09/12			91	50 - 150	<0.00024(2)	ng/g				
2610967	22'-DiCB-(4)	2011/09/12			91	50 - 150	<0.00076(2)	ng/g				
2610967	4,4'-DiCB-(15)	2011/09/12			101	50 - 150	<0.00051	ng/g				
2610967	22'6-TriCB-(19)	2011/09/12			104	50 - 150	0.000, RDL=0.010	ng/g				
2610967	235-TriCB-(23)	2011/09/12			113	50 - 150	<0.000045	ng/g				
2610967	23'5'-TriCB-(34)	2011/09/12			105	50 - 150	<0.000042	ng/g				
2610967	344'-TriCB-(37)	2011/09/12			98	50 - 150	0.000, RDL=0.010	ng/g				
2610967	22'66'-TetraCB-(54)	2011/09/12			107	50 - 150	<0.000071	ng/g				
2610967	33'44'-TetraCB-(77)	2011/09/12			95	50 - 150	0.000, RDL=0.010	ng/g				
2610967	344'5-TetraCB-(81)	2011/09/12			96	50 - 150	<0.00011(2)	ng/g				
2610967	22'466'-PentaCB-(104)	2011/09/12			87	50 - 150	<0.000049	ng/g				
2610967	233'44'-PentaCB-(105)	2011/09/12			102	50 - 150	0.001, RDL=0.010	ng/g				
2610967	2344'5-PentaCB-(114)	2011/09/12			98	50 - 150	<0.00016	ng/g				
2610967	23'44'5-PentaCB-(118)	2011/09/12			105	50 - 150	0.005, RDL=0.010	ng/g				
2610967	23'44'5'-PentaCB-(123)	2011/09/12			102	50 - 150	<0.00012	ng/g				
2610967	33'44'5-PentaCB-(126)	2011/09/12			98	50 - 150	<0.00017	ng/g				
2610967	22'44'66'-HexaCB-(155)	2011/09/12			99	50 - 150	<0.000031	ng/g				
2610967	HexaCB-(156)+(157)	2011/09/12			101	50 - 150	<0.0020(2)	ng/g				
2610967	23'44'55'-HexaCB-(167)	2011/09/12			99	50 - 150	<0.00085(2)	ng/g				
2610967	33'44'55'-HexaCB-(169)	2011/09/12			101	50 - 150	<0.000082	ng/g				
2610967	22'33'44'5-HeptaCB-(170)	2011/09/12			107	50 - 150	0.007, RDL=0.010	ng/g				
2610967	HeptaCB-(180)+(193)	2011/09/12			102	50 - 150	0.013, RDL=0.020	ng/g				
2610967	22'344'56'-HeptaCB-(182)	2011/09/12			108	50 - 150	<0.00011	ng/g				
2610967	22'34'55'6-HeptaCB-(187)	2011/09/12			114	50 - 150	0.008, RDL=0.010	ng/g				
2610967	22'34'566'-HeptaCB-(188)	2011/09/12			99	50 - 150	<0.000086	ng/g				
2610967	233'44'55'-HeptaCB-(189)	2011/09/12			94	50 - 150	<0.00032(2)	ng/g				
2610967	22'33'55'66'-OctaCB-(202)	2011/09/12			102	50 - 150	0.000, RDL=0.010	ng/g				
2610967	233'44'55'6-OctaCB-(205)	2011/09/12			98	50 - 150	<0.00011	ng/g				
2610967	22'33'44'55'6-NonaCB-(206)	2011/09/12			100	50 - 150	<0.00039	ng/g				
2610967	22'33'455'66'-NonaCB-(208)	2011/09/12			93	50 - 150	<0.00039	ng/g				
2610967	DecaCB-(209)	2011/09/12			94	50 - 150	<0.00013	ng/g				
2610967	3-MonoCB-(2)	2011/09/12					<0.00012	ng/g				
2610967	2,3-DiCB-(5)	2011/09/12					<0.00039	ng/g				
2610967	2,3'-DiCB-(6)	2011/09/12					<0.00035	ng/g				
2610967	2,4-DiCB-(7)	2011/09/12					<0.00037	ng/g				
2610967	2,4'-DiCB-(8)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	2,5-DiCB-(9)	2011/09/12					<0.00034	ng/g				

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QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2610967	2,6-DiCB-(10)	2011/09/12					<0.00050	ng/g				
2610967	3,3'-DiCB-(11)	2011/09/12					0.004, RDL=0.010	ng/g				
2610967	DiCB-(12)+(13)	2011/09/12					<0.00036	ng/g				
2610967	3,5-DiCB-(14)	2011/09/12					<0.00032	ng/g				
2610967	22'3-TriCB-(16)	2011/09/12					<0.00040(2)	ng/g				
2610967	22'4-TriCB-(17)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	TriCB-(18)+(30)	2011/09/12					0.001, RDL=0.020	ng/g				
2610967	TriCB-(20) + (28)	2011/09/12					0.002, RDL=0.020	ng/g				
2610967	TriCB-(21)+(33)	2011/09/12					0.001, RDL=0.020	ng/g				
2610967	234'-TriCB-(22)	2011/09/12					<0.00051(2)	ng/g				
2610967	236-TriCB-(24)	2011/09/12					<0.00012	ng/g				
2610967	23'4-TriCB-(25)	2011/09/12					<0.000075(2)	ng/g				
2610967	TriCB-(26)+(29)	2011/09/12					<0.00021(2)	ng/g				
2610967	23'6-TriCB-(27)	2011/09/12					<0.00011	ng/g				
2610967	24'5-TriCB-(31)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	24'6-TriCB-(32)	2011/09/12					<0.00038(2)	ng/g				
2610967	33'4-TriCB-(35)	2011/09/12					<0.000042	ng/g				
2610967	33'5-TriCB-(36)	2011/09/12					<0.000036	ng/g				
2610967	345-TriCB-(38)	2011/09/12					<0.000041	ng/g				
2610967	34'5-TriCB-(39)	2011/09/12					<0.000040	ng/g				
2610967	TetraCB-(40)+(41)+(71)	2011/09/12					<0.00030(2)	ng/g				
2610967	22'34'-TetraCB-(42)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	22'35-TetraCB-(43)	2011/09/12					<0.00011	ng/g				
2610967	TetraCB-(44)+(47)+(65)	2011/09/12					0.001, RDL=0.030	ng/g				
2610967	TetraCB-(45)+(51)	2011/09/12					<0.00021(2)	ng/g				
2610967	22'36'-TetraCB-(46)	2011/09/12					<0.00012	ng/g				
2610967	22'45-TetraCB-(48)	2011/09/12					<0.00020(2)	ng/g				
2610967	TetraCB-(49)+TetraCB-(69)	2011/09/12					<0.00041(2)	ng/g				
2610967	TetraCB-(50)+(53)	2011/09/12					<0.00018(2)	ng/g				
2610967	22'55'-TetraCB-(52)	2011/09/12					0.003, RDL=0.010	ng/g				
2610967	233'4-TetraCB-(55)	2011/09/12					<0.00010	ng/g				
2610967	233'4'-Tetra CB(56)	2011/09/12					<0.00021(2)	ng/g				
2610967	233'5-TetraCB-(57)	2011/09/12					<0.000096	ng/g				
2610967	233'5'-TetraCB-(58)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	TetraCB-(59)+(62)+(75)	2011/09/12					<0.000082	ng/g				
2610967	2344'-TetraCB -(60)	2011/09/12					<0.000082	ng/g				
2610967	TetraCB-(61)+(70)+(74)+(76)	2011/09/12					0.001, RDL=0.040	ng/g				
2610967	234'5-TetraCB-(63)	2011/09/12					<0.000090	ng/g				
2610967	234'6-TetraCB-(64)	2011/09/12					<0.00037(2)	ng/g				

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QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2610967	23'44'-TetraCB-(66)	2011/09/12					<0.00053(2)	ng/g				
2610967	23'45-TetraCB-(67)	2011/09/12					<0.000087	ng/g				
2610967	23'45'-TetraCB-(68)	2011/09/12					<0.000091	ng/g				
2610967	23'55'-TetraCB-(72)	2011/09/12					<0.000090	ng/g				
2610967	23'5'6-TetraCB-(73)	2011/09/12					<0.000088	ng/g				
2610967	33'45-TetraCB-(78)	2011/09/12					<0.000096	ng/g				
2610967	33'45'-TetraCB(79)	2011/09/12					<0.000086	ng/g				
2610967	33'55'-TetraCB-(80)	2011/09/12					<0.000085	ng/g				
2610967	22'33'4-PentaCB-(82)	2011/09/12					<0.000045	ng/g				
2610967	PentaCB-(83)+(99)	2011/09/12					0.001, RDL=0.020	ng/g				
2610967	22'33'6-PentaCB-(84)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	PentaCB-(85)+(116)+(117)	2011/09/12					<0.000088(2)	ng/g				
2610967	PentaCB-(86)(87)(97)(109)(119)(125)	2011/09/12					0.003, RDL=0.060	ng/g				
2610967	PentaCB-(88)+(91)	2011/09/12					<0.00019(2)	ng/g				
2610967	22'346'-PentaCB-(89)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	PentaCB-(90)+(101)+(113)	2011/09/12					0.013, RDL=0.030	ng/g				
2610967	22'355'-PentaCB-(92)	2011/09/12					0.002, RDL=0.010	ng/g				
2610967	PentaCB-(93)+(98)+(100)+(102)	2011/09/12					<0.000038	ng/g				
2610967	22'356'-PentaCB-(94)	2011/09/12					<0.000043	ng/g				
2610967	22'35'6-PentaCB-(95)	2011/09/12					0.010, RDL=0.010	ng/g				
2610967	22'366'-PentaCB-(96)	2011/09/12					<0.000063	ng/g				
2610967	22'45'6-PentaCB-(103)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	233'45-PentaCB-(106)	2011/09/12					<0.000092	ng/g				
2610967	233'4'5-PentaCB-(107)	2011/09/12					<0.000096	ng/g				
2610967	PentaCB-(108)+(124)	2011/09/12					<0.00013(2)	ng/g				
2610967	PentaCB-(110)+(115)	2011/09/12					0.007, RDL=0.020	ng/g				
2610967	233'55'-PentaCB-(111)	2011/09/12					<0.000030	ng/g				
2610967	233'56-PentaCB-(112)	2011/09/12					<0.000030	ng/g				
2610967	23'455'-PentaCB-(120)	2011/09/12					<0.000028	ng/g				
2610967	23'45'6-PentaCB-(121)	2011/09/12					<0.000029	ng/g				
2610967	233'4'5'-PentaCB-(122)	2011/09/12					<0.00010	ng/g				
2610967	33'455'-PentaCB-(127)	2011/09/12					<0.000090	ng/g				
2610967	HexaCB-(128)+(166)	2011/09/12					<0.0017(2)	ng/g				
2610967	HexaCB-(129)+(138)+(163)	2011/09/12					0.023, RDL=0.030	ng/g				
2610967	22'33'45'-HexaCB-(130)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	22'33'46-HexaCB-(131)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	22'33'46'-HexaCB-(132)	2011/09/12					0.007, RDL=0.010	ng/g				
2610967	22'33'55'-HexaCB-(133)	2011/09/12					<0.00037(2)	ng/g				
2610967	HexaCB-(134)+(143)	2011/09/12					0.001, RDL=0.020	ng/g				

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QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2610967	HexaCB-(135)+(151)	2011/09/12					0.010, RDL=0.020	ng/g				
2610967	22'33'66'-HexaCB-(136)	2011/09/12					0.003, RDL=0.010	ng/g				
2610967	22'344'5-HexaCB-(137)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	HexaCB-(139)+(140)	2011/09/12					<0.000049(2)	ng/g				
2610967	22'3455'-HexaCB-(141)	2011/09/12					0.005, RDL=0.010	ng/g				
2610967	22'3456-HexaCB-(142)	2011/09/12					<0.000090	ng/g				
2610967	22'345'6-HexaCB-(144)	2011/09/12					<0.00099(2)	ng/g				
2610967	22'3466'-HexaCB-(145)	2011/09/12					<0.000040	ng/g				
2610967	22'34'55'-HexaCB-(146)	2011/09/12					0.003, RDL=0.010	ng/g				
2610967	HexaCB-(147)+(149)	2011/09/12					0.021, RDL=0.020	ng/g				
2610967	22'34'56'-HexaCB-(148)	2011/09/12					<0.000051	ng/g				
2610967	22'34'66'-HexaCB-(150)	2011/09/12					<0.000038	ng/g				
2610967	22'3566'-HexaCB-(152)	2011/09/12					<0.000033	ng/g				
2610967	HexaCB-(153)+(168)	2011/09/12					0.023, RDL=0.020	ng/g				
2610967	22'44'56'-HexaCB-(154)	2011/09/12					<0.000044	ng/g				
2610967	233'44'6-HexaCB-(158)	2011/09/12					0.002, RDL=0.010	ng/g				
2610967	233'455'-HexaCB-(159)	2011/09/12					<0.00025(2)	ng/g				
2610967	233'456-HexaCB-(160)	2011/09/12					<0.000068	ng/g				
2610967	233'45'6-HexaCB-(161)	2011/09/12					<0.000062	ng/g				
2610967	233'4'55'-HexaCB-(162)	2011/09/12					<0.000083	ng/g				
2610967	233'4'5'6-HexaCB-(164)	2011/09/12					0.002, RDL=0.010	ng/g				
2610967	233'55'6-HexaCB-(165)	2011/09/12					<0.000068	ng/g				
2610967	HeptaCB-(171)+(173)	2011/09/12					0.003, RDL=0.020	ng/g				
2610967	22'33'455'-HeptaCB-(172)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	22'33'456'-HeptaCB-(174)	2011/09/12					0.007, RDL=0.010	ng/g				
2610967	22'33'45'6-HeptaCB-(175)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	22'33'466'-HeptaCB-(176)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	22'33'45'6'-HeptaCB-(177)	2011/09/12					0.004, RDL=0.010	ng/g				
2610967	22'33'55'6-HeptaCB-(178)	2011/09/12					0.002, RDL=0.010	ng/g				
2610967	22'33'566'-HeptaCB-(179)	2011/09/12					0.003, RDL=0.010	ng/g				
2610967	22'344'56-HeptaCB-(181)	2011/09/12					<0.00022	ng/g				
2610967	22'344'5'6-HeptaCB-(183)	2011/09/12					0.004, RDL=0.010	ng/g				
2610967	22'344'66'-HeptaCB-(184)	2011/09/12					<0.000078	ng/g				
2610967	22'3455'6-HeptaCB-(185)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	22'34566'-HeptaCB-(186)	2011/09/12					<0.000081	ng/g				
2610967	233'44'56-HeptaCB-(190)	2011/09/12					<0.0011(2)	ng/g				
2610967	233'44'5'6-HeptaCB-(191)	2011/09/12					<0.00018	ng/g				
2610967	233'455'6-HeptaCB-(192)	2011/09/12					<0.00019	ng/g				
2610967	22'33'44'55'-OctaCB-(194)	2011/09/12					0.003, RDL=0.010	ng/g				

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QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2610967	22'33'44'56-OctaCB-(195)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	22'33'44'56'-OctaCB-(196)	2011/09/12					0.002, RDL=0.010	ng/g				
2610967	22'33'44'66'OctaCB-(197)	2011/09/12					<0.000093	ng/g				
2610967	OctaCB-(198)+(199)	2011/09/12					<0.0024(2)	ng/g				
2610967	22'33'4566'-OctaCB-(200)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	22'33'45'66'-OctaCB-(201)	2011/09/12					<0.00034(2)	ng/g				
2610967	22'344'55'6-OctaCB-(203)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	22'344'566'-OctaCB-(204)	2011/09/12					<0.000094	ng/g				
2610967	22'33'44'566'-NonaCB-(207)	2011/09/12					<0.00036	ng/g				
2610967	Total PCB	2011/09/12					0.223, RDL=N/A	ng/g				
2618245	C13-2,44'-TriCB-(28)	2011/09/19			107	30 - 135	86	%				
2618245	C13-22'33'44'55'6-NonaCB-(206)	2011/09/19			111	25 - 150	111	%				
2618245	C13-22'33'44'5-HeptaCB-(170)	2011/09/19			103	25 - 150	103	%				
2618245	C13-22'33'455'66'-NonaCB-(208)	2011/09/19			119	25 - 150	116	%				
2618245	C13-22'33'55'66'-OctaCB-(202)	2011/09/19			113	25 - 150	112	%				
2618245	C13-22'33'55'6-HeptaCB-(178)	2011/09/19			118	30 - 135	114	%				
2618245	C13-22'344'55'-HeptaCB-(180)	2011/09/19			108	30 - 135	106	%				
2618245	C13-22'34'566'-HeptaCB-(188)	2011/09/19			116	25 - 150	114	%				
2618245	C13-22'44'66'-HexaCB-(155)	2011/09/19			128	25 - 150	109	%				
2618245	C13-22'466'-PentaCB-(104)	2011/09/19			104	25 - 150	89	%				
2618245	C13-22'66'-TetraCB-(54)	2011/09/19			92	25 - 150	69	%				
2618245	C13-22'6-TriCB-(19)	2011/09/19			69	25 - 150	47	%				
2618245	C13-22'-DiCB-(4)	2011/09/19			72	25 - 150	48	%				
2618245	C13-233'44'55'6-OctaCB-(205)	2011/09/19			105	25 - 150	103	%				
2618245	C13-233'44'55'-HeptaCB-(189)	2011/09/19			103	25 - 150	104	%				
2618245	C13-233'44'-PentaCB-(105)	2011/09/19			101	25 - 150	99	%				
2618245	C13-233'55'-PentaCB-(111)	2011/09/19			98	30 - 135	94	%				
2618245	C13-23'44'55'-HexaCB-(167)	2011/09/19			108	25 - 150	109	%				
2618245	C13-2344'5-PentaCB-(114)	2011/09/19			99	25 - 150	97	%				
2618245	C13-23'44'5-PentaCB-(118)	2011/09/19			100	25 - 150	99	%				
2618245	C13-2'344'5-PentaCB-(123)	2011/09/19			101	25 - 150	98	%				
2618245	C13-2-MonoCB-(1)	2011/09/19			60	15 - 150	39	%				
2618245	C13-33'44'55'-HexaCB-(169)	2011/09/19			66	25 - 150	61	%				
2618245	C13-33'44'5-PentaCB-(126)	2011/09/19			92	25 - 150	92	%				
2618245	C13-33'44'-TetraCB-(77)	2011/09/19			102	25 - 150	96	%				
2618245	C13-344'5-TetraCB-(81)	2011/09/19			103	25 - 150	96	%				
2618245	C13-344'-TriCB-(37)	2011/09/19			107	25 - 150	90	%				
2618245	C13-44'-DiCB-(15)	2011/09/19			89	25 - 150	66	%				
2618245	C13-4-MonoCB-(3)	2011/09/19			65	15 - 150	43	%				

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QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2618245	C13-DecaCB-(209)	2011/09/19			121	25 - 150	118	%				
2618245	C13-HexaCB-(156)+(157)	2011/09/19			111	25 - 150	105	%				
2618245	2-MonoCB-(1)	2011/09/19			100	50 - 150	0.000, RDL=0.010	ng/g				
2618245	4-MonoCB-(3)	2011/09/19			101	50 - 150	<0.00015	ng/g				
2618245	22'-DiCB-(4)	2011/09/19			99	50 - 150	<0.0013	ng/g				
2618245	4,4'-DiCB-(15)	2011/09/19			108	50 - 150	<0.0011	ng/g				
2618245	22'6-TriCB-(19)	2011/09/19			113	50 - 150	<0.00030	ng/g				
2618245	235-TriCB-(23)	2011/09/19			107	50 - 150	<0.00010	ng/g				
2618245	23'5'-TriCB-(34)	2011/09/19			99	50 - 150	<0.000097	ng/g				
2618245	344'-TriCB-(37)	2011/09/19			104	50 - 150	<0.00019(2)	ng/g				
2618245	22'66'-TetraCB-(54)	2011/09/19			107	50 - 150	<0.00016	ng/g				
2618245	33'44'-TetraCB-(77)	2011/09/19			107	50 - 150	<0.00010	ng/g				
2618245	344'5-TetraCB-(81)	2011/09/19			105	50 - 150	<0.000098	ng/g				
2618245	22'466'-PentaCB-(104)	2011/09/19			97	50 - 150	<0.000091	ng/g				
2618245	233'44'-PentaCB-(105)	2011/09/19			106	50 - 150	0.001, RDL=0.010	ng/g				
2618245	2344'5-PentaCB-(114)	2011/09/19			104	50 - 150	<0.000072	ng/g				
2618245	23'44'5-PentaCB-(118)	2011/09/19			113	50 - 150	0.005, RDL=0.010	ng/g				
2618245	23'44'5'-PentaCB-(123)	2011/09/19			107	50 - 150	<0.000073	ng/g				
2618245	33'44'5-PentaCB-(126)	2011/09/19			107	50 - 150	<0.000072	ng/g				
2618245	22'44'66'-HexaCB-(155)	2011/09/19			99	50 - 150	<0.000058	ng/g				
2618245	HexaCB-(156)+(157)	2011/09/19			102	50 - 150	0.002, RDL=0.020	ng/g				
2618245	23'44'55'-HexaCB-(167)	2011/09/19			102	50 - 150	0.001, RDL=0.010	ng/g				
2618245	33'44'55'-HexaCB-(169)	2011/09/19			103	50 - 150	<0.00011	ng/g				
2618245	22'33'44'5-HeptaCB-(170)	2011/09/19			113	50 - 150	0.005, RDL=0.010	ng/g				
2618245	HeptaCB-(180)+(193)	2011/09/19			107	50 - 150	0.010, RDL=0.020	ng/g				
2618245	22'344'56'-HeptaCB-(182)	2011/09/19			108	50 - 150	<0.00013	ng/g				
2618245	22'34'55'6-HeptaCB-(187)	2011/09/19			112	50 - 150	0.005, RDL=0.010	ng/g				
2618245	22'34'566'-HeptaCB-(188)	2011/09/19			98	50 - 150	<0.000099	ng/g				
2618245	233'44'55'-HeptaCB-(189)	2011/09/19			101	50 - 150	0.000, RDL=0.010	ng/g				
2618245	22'33'55'66'-OctaCB-(202)	2011/09/19			106	50 - 150	<0.00016(2)	ng/g				
2618245	233'44'55'6-OctaCB-(205)	2011/09/19			104	50 - 150	<0.000086	ng/g				
2618245	22'33'44'55'6-NonaCB-(206)	2011/09/19			102	50 - 150	<0.00048	ng/g				
2618245	22'33'455'66'-NonaCB-(208)	2011/09/19			95	50 - 150	<0.00048	ng/g				
2618245	DecaCB-(209)	2011/09/19			95	50 - 150	<0.00022	ng/g				
2618245	3-MonoCB-(2)	2011/09/19					<0.00016	ng/g				
2618245	2,3-DiCB-(5)	2011/09/19					<0.00080	ng/g				
2618245	2,3'-DiCB-(6)	2011/09/19					<0.00076	ng/g				
2618245	2,4-DiCB-(7)	2011/09/19					<0.00076	ng/g				
2618245	2,4'-DiCB-(8)	2011/09/19					<0.00073(2)	ng/g				

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Your P.O. #: 16400NR
Sampler Initials: DC

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2618245	2,5-DiCB-(9)	2011/09/19					<0.00075	ng/g				
2618245	2,6-DiCB-(10)	2011/09/19					<0.0014	ng/g				
2618245	3,3'-DiCB-(11)	2011/09/19					0.002, RDL=0.010	ng/g				
2618245	DiCB-(12)+(13)	2011/09/19					<0.00078	ng/g				
2618245	3,5-DiCB-(14)	2011/09/19					<0.00075	ng/g				
2618245	22'3-TriCB-(16)	2011/09/19					<0.00036	ng/g				
2618245	22'4-TriCB-(17)	2011/09/19					<0.00037	ng/g				
2618245	TriCB-(18)+(30)	2011/09/19					0.001, RDL=0.020	ng/g				
2618245	TriCB-(20) + (28)	2011/09/19					0.001, RDL=0.020	ng/g				
2618245	TriCB-(21)+(33)	2011/09/19					0.000, RDL=0.020	ng/g				
2618245	234'-TriCB-(22)	2011/09/19					<0.00036(2)	ng/g				
2618245	236-TriCB-(24)	2011/09/19					<0.00029	ng/g				
2618245	23'4-TriCB-(25)	2011/09/19					<0.000091	ng/g				
2618245	TriCB-(26)+(29)	2011/09/19					<0.00014(2)	ng/g				
2618245	23'6-TriCB-(27)	2011/09/19					<0.00026	ng/g				
2618245	24'5-TriCB-(31)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	24'6-TriCB-(32)	2011/09/19					<0.00024	ng/g				
2618245	33'4-TriCB-(35)	2011/09/19					<0.000099	ng/g				
2618245	33'5-TriCB-(36)	2011/09/19					<0.000088	ng/g				
2618245	345-TriCB-(38)	2011/09/19					<0.00010	ng/g				
2618245	34'5-TriCB-(39)	2011/09/19					<0.000096	ng/g				
2618245	TetraCB-(40)+(41)+(71)	2011/09/19					<0.00026(2)	ng/g				
2618245	22'34'-TetraCB-(42)	2011/09/19					<0.00022	ng/g				
2618245	22'35-TetraCB-(43)	2011/09/19					<0.00022	ng/g				
2618245	TetraCB-(44)+(47)+(65)	2011/09/19					<0.00088(2)	ng/g				
2618245	TetraCB-(45)+(51)	2011/09/19					<0.00022(2)	ng/g				
2618245	22'36'-TetraCB-(46)	2011/09/19					<0.00024	ng/g				
2618245	22'45-TetraCB-(48)	2011/09/19					<0.00020	ng/g				
2618245	TetraCB-(49)+TetraCB-(69)	2011/09/19					<0.00035(2)	ng/g				
2618245	TetraCB-(50)+(53)	2011/09/19					<0.00020	ng/g				
2618245	22'55'-TetraCB-(52)	2011/09/19					0.003, RDL=0.010	ng/g				
2618245	233'4-TetraCB-(55)	2011/09/19					<0.000086	ng/g				
2618245	233'4'-Tetra CB(56)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	233'5-TetraCB-(57)	2011/09/19					<0.000083	ng/g				
2618245	233'5'-TetraCB-(58)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	TetraCB-(59)+(62)+(75)	2011/09/19					<0.00015	ng/g				
2618245	2344'-TetraCB -(60)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	TetraCB-(61)+(70)+(74)+(76)	2011/09/19					0.001, RDL=0.040	ng/g				
2618245	234'5-TetraCB-(63)	2011/09/19					<0.000077	ng/g				

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Sampler Initials: DC

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2618245	234'6-TetraCB-(64)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	23'44'-TetraCB-(66)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	23'45-TetraCB-(67)	2011/09/19					<0.000077	ng/g				
2618245	23'45'-TetraCB-(68)	2011/09/19					<0.000077	ng/g				
2618245	23'55'-TetraCB-(72)	2011/09/19					<0.000077	ng/g				
2618245	23'5'6-TetraCB-(73)	2011/09/19					<0.00015	ng/g				
2618245	33'45-TetraCB-(78)	2011/09/19					<0.000084	ng/g				
2618245	33'45'-TetraCB(79)	2011/09/19					<0.000073	ng/g				
2618245	33'55'-TetraCB-(80)	2011/09/19					<0.000074	ng/g				
2618245	22'33'4-PentaCB-(82)	2011/09/19					<0.00018	ng/g				
2618245	PentaCB-(83)+(99)	2011/09/19					0.001, RDL=0.020	ng/g				
2618245	22'33'6-PentaCB-(84)	2011/09/19					<0.00079(2)	ng/g				
2618245	PentaCB-(85)+(116)+(117)	2011/09/19					<0.00012	ng/g				
2618245	PentaCB-(86)(87)(97)(109)(119)(125)	2011/09/19					0.003, RDL=0.060	ng/g				
2618245	PentaCB-(88)+(91)	2011/09/19					<0.00014(2)	ng/g				
2618245	22'346'-PentaCB-(89)	2011/09/19					<0.00016	ng/g				
2618245	PentaCB-(90)+(101)+(113)	2011/09/19					0.015, RDL=0.030	ng/g				
2618245	22'355'-PentaCB-(92)	2011/09/19					0.002, RDL=0.010	ng/g				
2618245	PentaCB-(93)+(98)+(100)+(102)	2011/09/19					<0.00014	ng/g				
2618245	22'356'-PentaCB-(94)	2011/09/19					<0.00016	ng/g				
2618245	22'35'6-PentaCB-(95)	2011/09/19					0.011, RDL=0.010	ng/g				
2618245	22'366'-PentaCB-(96)	2011/09/19					<0.00013	ng/g				
2618245	22'45'6-PentaCB-(103)	2011/09/19					<0.00013	ng/g				
2618245	233'45-PentaCB-(106)	2011/09/19					<0.000067	ng/g				
2618245	233'4'5-PentaCB-(107)	2011/09/19					<0.000060	ng/g				
2618245	PentaCB-(108)+(124)	2011/09/19					0.000, RDL=0.020	ng/g				
2618245	PentaCB-(110)+(115)	2011/09/19					0.008, RDL=0.020	ng/g				
2618245	233'55'-PentaCB-(111)	2011/09/19					<0.00011	ng/g				
2618245	233'56-PentaCB-(112)	2011/09/19					<0.00012	ng/g				
2618245	23'455'-PentaCB-(120)	2011/09/19					<0.00011	ng/g				
2618245	23'45'6-PentaCB-(121)	2011/09/19					<0.00011	ng/g				
2618245	233'4'5'-PentaCB-(122)	2011/09/19					<0.000072	ng/g				
2618245	33'455'-PentaCB-(127)	2011/09/19					<0.000065	ng/g				
2618245	HexaCB-(128)+(166)	2011/09/19					<0.0016(2)	ng/g				
2618245	HexaCB-(129)+(138)+(163)	2011/09/19					0.024, RDL=0.030	ng/g				
2618245	22'33'45'-HexaCB-(130)	2011/09/19					<0.00095(2)	ng/g				
2618245	22'33'46-HexaCB-(131)	2011/09/19					<0.00063	ng/g				
2618245	22'33'46'-HexaCB-(132)	2011/09/19					0.008, RDL=0.010	ng/g				
2618245	22'33'55'-HexaCB-(133)	2011/09/19					<0.00059	ng/g				

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Sampler Initials: DC

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2618245	HexaCB-(134)+(143)	2011/09/19					0.001, RDL=0.020	ng/g				
2618245	HexaCB-(135)+(151)	2011/09/19					0.010, RDL=0.020	ng/g				
2618245	22'33'66'-HexaCB-(136)	2011/09/19					0.004, RDL=0.010	ng/g				
2618245	22'344'5-HexaCB-(137)	2011/09/19					<0.00058	ng/g				
2618245	HexaCB-(139)+(140)	2011/09/19					<0.00055	ng/g				
2618245	22'3455'-HexaCB-(141)	2011/09/19					0.006, RDL=0.010	ng/g				
2618245	22'3456-HexaCB-(142)	2011/09/19					<0.00064	ng/g				
2618245	22'345'6-HexaCB-(144)	2011/09/19					0.002, RDL=0.010	ng/g				
2618245	22'3466'-HexaCB-(145)	2011/09/19					<0.000083	ng/g				
2618245	22'34'55'-HexaCB-(146)	2011/09/19					0.004, RDL=0.010	ng/g				
2618245	HexaCB-(147)+(149)	2011/09/19					0.021, RDL=0.020	ng/g				
2618245	22'34'56'-HexaCB-(148)	2011/09/19					<0.00011	ng/g				
2618245	22'34'66'-HexaCB-(150)	2011/09/19					<0.000077	ng/g				
2618245	22'3566'-HexaCB-(152)	2011/09/19					<0.000078	ng/g				
2618245	HexaCB-(153)+(168)	2011/09/19					0.022, RDL=0.020	ng/g				
2618245	22'44'56'-HexaCB-(154)	2011/09/19					<0.000091	ng/g				
2618245	233'44'6-HexaCB-(158)	2011/09/19					0.003, RDL=0.010	ng/g				
2618245	233'455'-HexaCB-(159)	2011/09/19					<0.00010	ng/g				
2618245	233'456-HexaCB-(160)	2011/09/19					<0.00046	ng/g				
2618245	233'45'6-HexaCB-(161)	2011/09/19					<0.00043	ng/g				
2618245	233'4'55'-HexaCB-(162)	2011/09/19					<0.00011	ng/g				
2618245	233'4'5'6-HexaCB-(164)	2011/09/19					0.002, RDL=0.010	ng/g				
2618245	233'55'6-HexaCB-(165)	2011/09/19					<0.00048	ng/g				
2618245	HeptaCB-(171)+(173)	2011/09/19					0.002, RDL=0.020	ng/g				
2618245	22'33'455'-HeptaCB-(172)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	22'33'456'-HeptaCB-(174)	2011/09/19					0.005, RDL=0.010	ng/g				
2618245	22'33'45'6-HeptaCB-(175)	2011/09/19					<0.00028(2)	ng/g				
2618245	22'33'466'-HeptaCB-(176)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	22'33'45'6'-HeptaCB-(177)	2011/09/19					<0.0027(2)	ng/g				
2618245	22'33'55'6-HeptaCB-(178)	2011/09/19					<0.00095(2)	ng/g				
2618245	22'33'566'-HeptaCB-(179)	2011/09/19					<0.0018(2)	ng/g				
2618245	22'344'56-HeptaCB-(181)	2011/09/19					<0.00026	ng/g				
2618245	22'344'5'6-HeptaCB-(183)	2011/09/19					0.003, RDL=0.010	ng/g				
2618245	22'344'66'-HeptaCB-(184)	2011/09/19					<0.000092	ng/g				
2618245	22'3455'6-HeptaCB-(185)	2011/09/19					<0.00026	ng/g				
2618245	22'34566'-HeptaCB-(186)	2011/09/19					<0.00010	ng/g				
2618245	233'44'56-HeptaCB-(190)	2011/09/19					<0.00091(2)	ng/g				
2618245	233'44'5'6-HeptaCB-(191)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	233'455'6-HeptaCB-(192)	2011/09/19					<0.00023	ng/g				

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Sampler Initials: DC

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2618245	22'33'44'55'-OctaCB-(194)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	22'33'44'56-OctaCB-(195)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	22'33'44'56'-OctaCB-(196)	2011/09/19					<0.00073(2)	ng/g				
2618245	22'33'44'66'OctaCB-(197)	2011/09/19					<0.00012	ng/g				
2618245	OctaCB-(198)+(199)	2011/09/19					<0.00097(2)	ng/g				
2618245	22'33'4566'-OctaCB-(200)	2011/09/19					<0.00011	ng/g				
2618245	22'33'45'66'-OctaCB-(201)	2011/09/19					<0.00017(2)	ng/g				
2618245	22'344'55'6-OctaCB-(203)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	22'344'566'-OctaCB-(204)	2011/09/19					<0.00011	ng/g				
2618245	22'33'44'566'-NonaCB-(207)	2011/09/19					<0.00043	ng/g				
2618245	Total PCB	2011/09/19					0.202, RDL=N/A	ng/g				

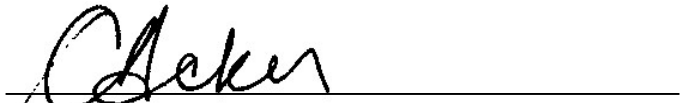
N/A = Not Applicable
RDL = Reportable Detection Limit
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) - Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.
(2) - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Validation Signature Page

Maxxam Job #: B1D0971

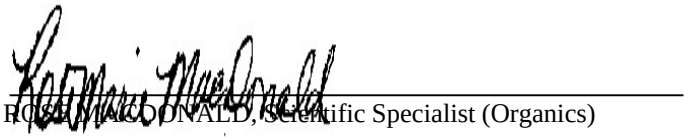
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

EDMOND MCNEIL, B.Sc.(Hons), C.Chem., Senior Scientific Specialist, HRMS Services



COLLEEN ACKER,

ROBIN SMITH-ARMSTRONG, Bedford SemiVol Spvsr



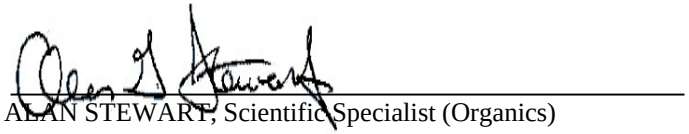
ROSE MACDONALD, Scientific Specialist (Organics)

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Validation Signature Page

Maxxam Job #: B1D0971

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



ALAN STEWART, Scientific Specialist (Organics)

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your C.O.C. #: ES333611

Attention: Jim Slade
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/09/09

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1D4086
Received: 2011/09/01, 10:02

Sample Matrix: Soil
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Moisture	12	N/A	2011/09/01	ATL SOP 00001 R3	MOE Handbook 1983
PCB/DDT in Soil by GC-ECD	12	2011/09/01	2011/09/06	ATL SOP 00106 R4	Based EPA8082
Total Organic Carbon in Soil	12	2011/09/08	2011/09/09	ATL SOP 00044 R4/00045 R4	LECO 203-601-224

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Job #: B1D4086
Report Date: 2011/09/09

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF SOIL

Maxxam ID		KT0251	KT0251		KT0253		KT0254		KT0255	KT0256		KT0257		
Sampling Date		2011/08/19	2011/08/19		2011/08/22		2011/08/22		2011/08/22	2011/08/22		2011/08/22		
	Units	**11-SED-DUP4**	**11-SED-DUP4 Lab-Dup**	**RDL**	**11-SED30**	**RDL**	**11-SED49**	**RDL**	**11-SED54**	**11-SED60**	**RDL**	**11-SED58**	**RDL**	**QC Batch**
Inorganics														
Moisture	%	30		1	51	1	59	1	23	22	1	56	1	2601391
Organic Carbon (TOC)	g/kg	6.5	6.3	0.4	17	0.5	21	0.4	5.5	1.9	0.2	19	0.5	2609304

Maxxam ID		KT0258		KT0259	KT0260		KT0261		KT0262	KT0263		
Sampling Date		2011/08/25		2011/08/25	2011/08/25		2011/08/25		2011/08/25	2011/08/22		
	Units	**11-SED32**	**RDL**	**11-SED34**	**11-SED47**	**RDL**	**11-SED50**	**RDL**	**11-SED41**	**11-SED-DUP6**	**RDL**	**QC Batch**
Inorganics												
Moisture	%	53	1	36	36	1	24	1	28	27	1	2601391
Organic Carbon (TOC)	g/kg	12	0.4	6.5	5.7	0.3	6.3	0.2	3.7	5.5	0.3	2609304

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		KT0251	KT0253	KT0254	KT0255	KT0256	KT0257		
Sampling Date		2011/08/19	2011/08/22	2011/08/22	2011/08/22	2011/08/22	2011/08/22		
	Units	**11-SED-DUP4**	**11-SED30**	**11-SED49**	**11-SED54**	**11-SED60**	**11-SED58**	**RDL**	**QC Batch**
PCBs									
Total PCB	mg/kg	0.05	0.05	<0.01	<0.01	<0.01	<0.01	0.01	2601999
Surrogate Recovery (%)									
Decachlorobiphenyl	%	74(1)	75(1)	78	86	89	86		2601999

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1260.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1D4086
Report Date: 2011/09/09

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		KT0258	KT0259	KT0260	KT0261	KT0262	KT0263		
Sampling Date		2011/08/25	2011/08/25	2011/08/25	2011/08/25	2011/08/25	2011/08/22		
	Units	**11-SED32**	**11-SED34**	**11-SED47**	**11-SED50**	**11-SED41**	**11-SED-DUP6**	**RDL**	**QC Batch**
PCBs									
Total PCB	mg/kg	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	0.01	2601999
Surrogate Recovery (%)									
Decachlorobiphenyl	%	84	84	86	87	85(1)	90		2601999

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1260.

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Maxxam Job #: B1D4086
Report Date: 2011/09/09

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

Package 1	5.5°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1D4086
Report Date: 2011/09/09

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2601999	Decachlorobiphenyl	2011/09/06	26(1, 2)	70 - 130	93	70 - 130	95	%				
2601999	Total PCB	2011/09/06	56(1, 3)	70 - 130	84	70 - 130	<0.01	mg/kg	NC	50		
2609304	Organic Carbon (TOC)	2011/09/09					<0.2	g/kg	3.4	35	99	75 - 125

N/A = Not Applicable
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) - Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.
(2) - PCB surrogate(s) not within acceptance limits. Analysis was repeated with similar results.
(3) - Matrix Spike: results are outside acceptance limit. Analysis was repeated with similar results.

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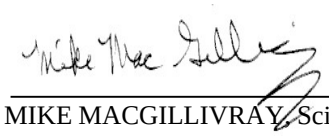
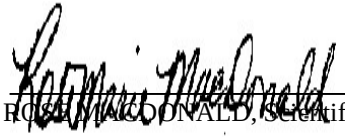
Validation Signature Page

Maxxam Job #: B1D4086

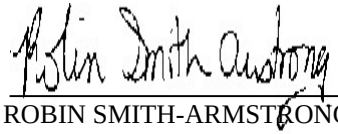
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



MIKE MACGILLIVRAY, Scientific Specialist (Inorganics)



ROSS MACDONALD, Scientific Specialist (Organics)



ROBIN SMITH-ARMSTRONG, Bedford SemiVol Spvsr

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Success Through Science®

Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your C.O.C. #: ES333611

Attention: Jim Slade
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/09/21

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1D4086
Received: 2011/09/01, 10:02

Sample Matrix: Soil
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Moisture	12	N/A	2011/09/01	ATL SOP 00001 R3	MOE Handbook 1983
Moisture (1)	1	N/A	2011/09/12	CAM SOP-00445	McKeague 2nd ed 1978
PCB Congeners in Soil (1668A) (1,2)	1	2011/09/10	2011/09/13	BRL SOP-00408	EPA 1668A mod.
PCB Congeners in Soil (1668A) (1,2)	1	2011/09/15	2011/09/19	BRL SOP-00408	EPA 1668A mod.
PCB/DDT in Soil by GC-ECD	12	2011/09/01	2011/09/06	ATL SOP 00106 R4	Based EPA8082
Total Organic Carbon in Soil	12	2011/09/08	2011/09/09	ATL SOP 00044 R4/00045 R4	LECO 203-601-224

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

(1) This test was performed by Maxxam Analytics Mississauga
(2) Soils are reported on a dry weight basis unless otherwise specified.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

==========

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Total cover pages: 1

Maxxam Job #: B1D4086
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF SOIL

Maxxam ID		KT0251	KT0251		KT0253		KT0254		KT0255	KT0256		KT0257		
Sampling Date		2011/08/19	2011/08/19		2011/08/22		2011/08/22		2011/08/22	2011/08/22		2011/08/22		
	Units	**11-SED-DUP4**	**11-SED-DUP4 Lab-Dup**	**RDL**	**11-SED30**	**RDL**	**11-SED49**	**RDL**	**11-SED54**	**11-SED60**	**RDL**	**11-SED58**	**RDL**	**QC Batch**
Inorganics														
Moisture	%	30		1	51	1	59	1	23	22	1	56	1	2601391
Organic Carbon (TOC)	g/kg	6.5	6.3	0.4	17	0.5	21	0.4	5.5	1.9	0.2	19	0.5	2609304

Maxxam ID		KT0258		KT0259	KT0260		KT0261		KT0262	KT0263	KT0264		
Sampling Date		2011/08/25		2011/08/25	2011/08/25		2011/08/25		2011/08/25	2011/08/22	2011/08/20		
	Units	**11-SED32**	**RDL**	**11-SED34**	**11-SED47**	**RDL**	**11-SED50**	**RDL**	**11-SED41**	**11-SED-DUP6**	**11-SED39**	**RDL**	**QC Batch**
Inorganics													
Moisture	%										27	1	2610921
Moisture	%	53	1	36	36	1	24	1	28	27		1	2601391
Organic Carbon (TOC)	g/kg	12	0.4	6.5	5.7	0.3	6.3	0.2	3.7	5.5		0.3	2609304

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		KT0251	KT0253	KT0254	KT0255	KT0256	KT0257		
Sampling Date		2011/08/19	2011/08/22	2011/08/22	2011/08/22	2011/08/22	2011/08/22		
	Units	**11-SED-DUP4**	**11-SED30**	**11-SED49**	**11-SED54**	**11-SED60**	**11-SED58**	**RDL**	**QC Batch**
PCBs									
Total PCB	mg/kg	0.05	0.05	<0.01	<0.01	<0.01	<0.01	0.01	2601999
Surrogate Recovery (%)									
Decachlorobiphenyl	%	74(1)	75(1)	78	86	89	86		2601999

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1260.

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Maxxam Job #: B1D4086
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		KT0258	KT0259	KT0260	KT0261	KT0262	KT0263		
Sampling Date		2011/08/25	2011/08/25	2011/08/25	2011/08/25	2011/08/25	2011/08/22		
	Units	**11-SED32**	**11-SED34**	**11-SED47**	**11-SED50**	**11-SED41**	**11-SED-DUP6**	**RDL**	**QC Batch**
PCBs									
Total PCB	mg/kg	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	0.01	2601999
Surrogate Recovery (%)									
Decachlorobiphenyl	%	84	84	86	87	85(1)	90		2601999

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1260.

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Maxxam Job #: B1D4086
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KT0258			KT0264		
Sampling Date		2011/08/25			2011/08/20		
	Units	**11-SED32**	**RDL**	**QC Batch**	**11-SED39**	**RDL**	**QC Batch**
PCBs							
2-MonoCB-(1)	ng/g	0.0010	0.0098	2610967	0.002	0.010	2618245
3-MonoCB-(2)	ng/g	0.0005	0.0098	2610967	<0.00051(1)	0.010	2618245
4-MonoCB-(3)	ng/g	0.0007	0.0098	2610967	0.001	0.010	2618245
22'-DiCB-(4)	ng/g	0.0015	0.0098	2610967	0.011	0.010	2618245
2,3-DiCB-(5)	ng/g	0.0053	0.0098	2610967	<0.00053	0.010	2618245
2,3'-DiCB-(6)	ng/g	<0.00062	0.0098	2610967	0.006	0.010	2618245
2,4-DiCB-(7)	ng/g	<0.00063	0.0098	2610967	<0.00089(1)	0.010	2618245
2,4'-DiCB-(8)	ng/g	<0.00058	0.0098	2610967	0.016	0.010	2618245
2,5-DiCB-(9)	ng/g	<0.00062	0.0098	2610967	<0.0013(1)	0.010	2618245
2,6-DiCB-(10)	ng/g	<0.00085	0.0098	2610967	0.001	0.010	2618245
3,3'-DiCB-(11)	ng/g	0.0046	0.0098	2610967	0.005	0.010	2618245
DiCB-(12)+(13)	ng/g	<0.00062	0.020	2610967	<0.0019(1)	0.020	2618245
3,5-DiCB-(14)	ng/g	<0.00059	0.0098	2610967	<0.00050	0.010	2618245
4,4'-DiCB-(15)	ng/g	0.0028	0.0098	2610967	0.010	0.010	2618245
22'3-TriCB-(16)	ng/g	0.0019	0.0098	2610967	0.002	0.010	2618245
22'4-TriCB-(17)	ng/g	0.0026	0.0098	2610967	0.002	0.010	2618245
TriCB-(18)+(30)	ng/g	0.005	0.020	2610967	0.004	0.020	2618245
22'6-TriCB-(19)	ng/g	0.0008	0.0098	2610967	0.001	0.010	2618245
TriCB-(20) + (28)	ng/g	0.018	0.020	2610967	0.008	0.020	2618245
TriCB-(21)+(33)	ng/g	0.006	0.020	2610967	0.004	0.020	2618245
234'-TriCB-(22)	ng/g	0.0029	0.0098	2610967	0.003	0.010	2618245
235-TriCB-(23)	ng/g	<0.00035	0.0098	2610967	<0.00010	0.010	2618245
236-TriCB-(24)	ng/g	<0.00026	0.0098	2610967	<0.00024	0.010	2618245
23'4-TriCB-(25)	ng/g	0.0013	0.0098	2610967	0.001	0.010	2618245
TriCB-(26)+(29)	ng/g	0.001	0.020	2610967	0.001	0.020	2618245
23'6-TriCB-(27)	ng/g	0.0005	0.0098	2610967	0.000	0.010	2618245
24'5-TriCB-(31)	ng/g	0.0076	0.0098	2610967	0.006	0.010	2618245
24'6-TriCB-(32)	ng/g	0.0032	0.0098	2610967	0.001	0.010	2618245
23'5'-TriCB-(34)	ng/g	<0.00033	0.0098	2610967	<0.000097	0.010	2618245
33'4-TriCB-(35)	ng/g	<0.00033	0.0098	2610967	<0.00031(1)	0.010	2618245
33'5-TriCB-(36)	ng/g	<0.00029	0.0098	2610967	<0.000087	0.010	2618245
344'-TriCB-(37)	ng/g	0.0025	0.0098	2610967	0.003	0.010	2618245
345-TriCB-(38)	ng/g	<0.00034	0.0098	2610967	<0.00010	0.010	2618245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Maxxam Job #: B1D4086
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KT0258			KT0264		
Sampling Date		2011/08/25			2011/08/20		
	Units	**11-SED32**	**RDL**	**QC Batch**	**11-SED39**	**RDL**	**QC Batch**
34'5-TriCB-(39)	ng/g	<0.00032	0.0098	2610967	<0.000095	0.010	2618245
TetraCB-(40)+(41)+(71)	ng/g	0.005	0.029	2610967	<0.0039(1)	0.030	2618245
22'34'-TetraCB-(42)	ng/g	0.0035	0.0098	2610967	0.002	0.010	2618245
22'35-TetraCB-(43)	ng/g	<0.00032	0.0098	2610967	<0.00010(1)	0.010	2618245
TetraCB-(44)+(47)+(65)	ng/g	0.015	0.029	2610967	0.011	0.030	2618245
TetraCB-(45)+(51)	ng/g	0.001	0.020	2610967	0.001	0.020	2618245
22'36'-TetraCB-(46)	ng/g	<0.00035	0.0098	2610967	0.000	0.010	2618245
22'45-TetraCB-(48)	ng/g	0.0017	0.0098	2610967	0.001	0.010	2618245
TetraCB-(49)+TetraCB-(69)	ng/g	0.019	0.020	2610967	0.008	0.020	2618245
TetraCB-(50)+(53)	ng/g	0.001	0.020	2610967	0.001	0.020	2618245
22'55'-TetraCB-(52)	ng/g	0.0289	0.0098	2610967	0.029	0.010	2618245
22'66'-TetraCB-(54)	ng/g	<0.00016	0.0098	2610967	<0.00012	0.010	2618245
233'4-TetraCB-(55)	ng/g	<0.00023	0.0098	2610967	<0.000089(1)	0.010	2618245
233'4'-Tetra CB(56)	ng/g	0.0032	0.0098	2610967	0.004	0.010	2618245
233'5-TetraCB-(57)	ng/g	<0.00022	0.0098	2610967	<0.000087	0.010	2618245
233'5'-TetraCB-(58)	ng/g	<0.00023	0.0098	2610967	0.002	0.010	2618245
TetraCB-(59)+(62)+(75)	ng/g	0.002	0.029	2610967	0.001	0.030	2618245
2344'-TetraCB -(60)	ng/g	0.0014	0.0098	2610967	0.002	0.010	2618245
TetraCB-(61)+(70)+(74)+(76)	ng/g	0.028	0.039	2610967	0.033	0.040	2618245
234'5-TetraCB-(63)	ng/g	0.0008	0.0098	2610967	0.001	0.010	2618245
234'6-TetraCB-(64)	ng/g	0.0041	0.0098	2610967	0.004	0.010	2618245
23'44'-TetraCB-(66)	ng/g	0.0170	0.0098	2610967	0.013	0.010	2618245
23'45-TetraCB-(67)	ng/g	<0.00020	0.0098	2610967	0.000	0.010	2618245
23'45'-TetraCB-(68)	ng/g	0.0010	0.0098	2610967	<0.00016(1)	0.010	2618245
23'55'-TetraCB-(72)	ng/g	0.0011	0.0098	2610967	0.000	0.010	2618245
23'5'6-TetraCB-(73)	ng/g	<0.00024	0.0098	2610967	<0.000082	0.010	2618245
33'44'-TetraCB-(77)	ng/g	0.0034	0.0098	2610967	0.002	0.010	2618245
33'45-TetraCB-(78)	ng/g	<0.00022	0.0098	2610967	<0.000088	0.010	2618245
33'45'-TetraCB(79)	ng/g	<0.00019	0.0098	2610967	<0.00065(1)	0.010	2618245
33'55'-TetraCB-(80)	ng/g	0.0005	0.0098	2610967	<0.000077	0.010	2618245
344'5-TetraCB-(81)	ng/g	<0.00024	0.0098	2610967	<0.000074(1)	0.010	2618245
22'33'4-PentaCB-(82)	ng/g	<0.0048(1)	0.0098	2610967	0.008	0.010	2618245
PentaCB-(83)+(99)	ng/g	0.100	0.020	2610967	0.054	0.020	2618245
22'33'6-PentaCB-(84)	ng/g	0.0112	0.0098	2610967	0.017	0.010	2618245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Maxxam Job #: B1D4086
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KT0258			KT0264		
Sampling Date		2011/08/25			2011/08/20		
	Units	**11-SED32**	**RDL**	**QC Batch**	**11-SED39**	**RDL**	**QC Batch**
PentaCB-(85)+(116)+(117)	ng/g	0.012	0.029	2610967	0.011	0.030	2618245
PentaCB-(86)(87)(97)(109)(119)(125)	ng/g	0.048	0.059	2610967	0.059	0.060	2618245
PentaCB-(88)+(91)	ng/g	0.005	0.020	2610967	0.008	0.020	2618245
22'346'-PentaCB-(89)	ng/g	<0.00044	0.0098	2610967	0.000	0.010	2618245
PentaCB-(90)+(101)+(113)	ng/g	0.147	0.029	2610967	0.151	0.030	2618245
22'355'-PentaCB-(92)	ng/g	0.0268	0.0098	2610967	0.021	0.010	2618245
PentaCB-(93)+(98)+(100)+(102)	ng/g	0.002	0.039	2610967	0.002	0.040	2618245
22'356'-PentaCB-(94)	ng/g	<0.00046	0.0098	2610967	0.000	0.010	2618245
22'35'6-PentaCB-(95)	ng/g	0.0567	0.0098	2610967	0.086	0.010	2618245
22'366'-PentaCB-(96)	ng/g	<0.00026(1)	0.0098	2610967	0.000	0.010	2618245
22'45'6-PentaCB-(103)	ng/g	0.0045	0.0098	2610967	<0.0012(1)	0.010	2618245
22'466'-PentaCB-(104)	ng/g	<0.00012	0.0098	2610967	<0.00014	0.010	2618245
233'44'-PentaCB-(105)	ng/g	0.0242	0.0098	2610967	0.039	0.010	2618245
233'45-PentaCB-(106)	ng/g	<0.00018	0.0098	2610967	<0.000087	0.010	2618245
233'4'5-PentaCB-(107)	ng/g	0.0123	0.0098	2610967	0.008	0.010	2618245
PentaCB-(108)+(124)	ng/g	0.002	0.020	2610967	0.003	0.020	2618245
PentaCB-(110)+(115)	ng/g	0.096	0.020	2610967	0.118	0.020	2618245
233'55'-PentaCB-(111)	ng/g	<0.00064(1)	0.0098	2610967	<0.00012	0.010	2618245
233'56-PentaCB-(112)	ng/g	<0.00032	0.0098	2610967	<0.00012	0.010	2618245
2344'5-PentaCB-(114)	ng/g	<0.00078(1)	0.0098	2610967	<0.0015(1)	0.010	2618245
23'44'5-PentaCB-(118)	ng/g	0.0933	0.0098	2610967	0.113	0.010	2618245
23'455'-PentaCB-(120)	ng/g	0.0031	0.0098	2610967	0.001	0.010	2618245
23'45'6-PentaCB-(121)	ng/g	<0.00031	0.0098	2610967	<0.00012	0.010	2618245
233'4'5'-PentaCB-(122)	ng/g	<0.00019	0.0098	2610967	<0.00060(1)	0.010	2618245
23'44'5'-PentaCB-(123)	ng/g	0.0005	0.0098	2610967	<0.000094	0.010	2618245
33'44'5-PentaCB-(126)	ng/g	0.0018	0.0098	2610967	0.003	0.010	2618245
33'455'-PentaCB-(127)	ng/g	<0.00017	0.0098	2610967	<0.000083	0.010	2618245
HexaCB-(128)+(166)	ng/g	0.040	0.020	2610967	0.059	0.020	2618245
HexaCB-(129)+(138)+(163)	ng/g	0.422	0.029	2610967	0.627	0.030	2618245
22'33'45'-HexaCB-(130)	ng/g	0.0256	0.0098	2610967	0.029	0.010	2618245
22'33'46-HexaCB-(131)	ng/g	0.0028	0.0098	2610967	<0.0027(1)	0.010	2618245
22'33'46'-HexaCB-(132)	ng/g	0.106	0.0098	2610967	0.145	0.010	2618245
22'33'55'-HexaCB-(133)	ng/g	<0.00051	0.0098	2610967	0.008	0.010	2618245
HexaCB-(134)+(143)	ng/g	0.013	0.020	2610967	0.019	0.020	2618245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Maxxam Job #: B1D4086
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KT0258			KT0264		
Sampling Date		2011/08/25			2011/08/20		
	Units	**11-SED32**	**RDL**	**QC Batch**	**11-SED39**	**RDL**	**QC Batch**
HexaCB-(135)+(151)	ng/g	0.167	0.020	2610967	0.187	0.020	2618245
22'33'66'-HexaCB-(136)	ng/g	0.0399	0.0098	2610967	0.055	0.010	2618245
22'344'5-HexaCB-(137)	ng/g	0.0027	0.0098	2610967	0.005	0.010	2618245
HexaCB-(139)+(140)	ng/g	0.007	0.020	2610967	0.004	0.020	2618245
22'3455'-HexaCB-(141)	ng/g	0.0303	0.0098	2610967	0.063	0.010	2618245
22'3456-HexaCB-(142)	ng/g	<0.00057	0.0098	2610967	<0.00051	0.010	2618245
22'345'6-HexaCB-(144)	ng/g	0.0156(1)	0.0098	2610967	0.025	0.010	2618245
22'3466'-HexaCB-(145)	ng/g	<0.00035	0.0098	2610967	<0.00012	0.010	2618245
22'34'55'-HexaCB-(146)	ng/g	0.117	0.0098	2610967	0.097	0.010	2618245
HexaCB-(147)+(149)	ng/g	0.332	0.020	2610967	0.417	0.020	2618245
22'34'56'-HexaCB-(148)	ng/g	0.0023	0.0098	2610967	<0.00043(2)	0.010	2618245
22'34'66'-HexaCB-(150)	ng/g	0.0006	0.0098	2610967	<0.00040(2)	0.010	2618245
22'3566'-HexaCB-(152)	ng/g	<0.00031	0.0098	2610967	0.000	0.010	2618245
HexaCB-(153)+(168)	ng/g	0.518	0.020	2610967	0.618	0.020	2618245
22'44'56'-HexaCB-(154)	ng/g	0.0116	0.0098	2610967	0.005	0.010	2618245
22'44'66'-HexaCB-(155)	ng/g	<0.00029	0.0098	2610967	<0.000084	0.010	2618245
HexaCB-(156)+(157)	ng/g	0.015	0.020	2610967	0.024	0.020	2618245
233'44'6-HexaCB-(158)	ng/g	0.0257	0.0098	2610967	0.035	0.010	2618245
233'455'-HexaCB-(159)	ng/g	0.0046	0.0098	2610967	0.006	0.010	2618245
233'456-HexaCB-(160)	ng/g	<0.00043	0.0098	2610967	<0.00037	0.010	2618245
233'45'6-HexaCB-(161)	ng/g	<0.00037	0.0098	2610967	<0.00034	0.010	2618245
233'4'55'-HexaCB-(162)	ng/g	0.0016	0.0098	2610967	0.001	0.010	2618245
233'4'5'6-HexaCB-(164)	ng/g	0.0205	0.0098	2610967	0.035	0.010	2618245
233'55'6-HexaCB-(165)	ng/g	0.0029	0.0098	2610967	<0.00038	0.010	2618245
23'44'55'-HexaCB-(167)	ng/g	0.0108	0.0098	2610967	0.016	0.010	2618245
33'44'55'-HexaCB-(169)	ng/g	0.0007	0.0098	2610967	0.001	0.010	2618245
22'33'44'5-HeptaCB-(170)	ng/g	0.138	0.0098	2610967	0.172	0.010	2618245
HeptaCB-(171)+(173)	ng/g	0.048	0.020	2610967	0.057	0.020	2618245
22'33'455'-HeptaCB-(172)	ng/g	0.0218	0.0098	2610967	0.026	0.010	2618245
22'33'456'-HeptaCB-(174)	ng/g	0.141	0.0098	2610967	0.200	0.010	2618245
22'33'45'6-HeptaCB-(175)	ng/g	0.0082	0.0098	2610967	0.008	0.010	2618245
22'33'466'-HeptaCB-(176)	ng/g	0.0199	0.0098	2610967	0.025	0.010	2618245
22'33'45'6'-HeptaCB-(177)	ng/g	0.121	0.0098	2610967	0.200	0.010	2618245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Partially shifted outside window due to matrix effects.
(2) - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Maxxam Job #: B1D4086
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KT0258			KT0264		
Sampling Date		2011/08/25			2011/08/20		
	Units	**11-SED32**	**RDL**	**QC Batch**	**11-SED39**	**RDL**	**QC Batch**
22'33'55'6-HeptaCB-(178)	ng/g	0.0463	0.0098	2610967	0.057	0.010	2618245
22'33'566'-HeptaCB-(179)	ng/g	0.0659	0.0098	2610967	0.095	0.010	2618245
HeptaCB-(180)+(193)	ng/g	0.265	0.020	2610967	0.332	0.020	2618245
22'344'56-HeptaCB-(181)	ng/g	<0.00042	0.0098	2610967	<0.00024	0.010	2618245
22'344'56'-HeptaCB-(182)	ng/g	<0.00036	0.0098	2610967	<0.00012	0.010	2618245
22'344'5'6-HeptaCB-(183)	ng/g	0.0949	0.0098	2610967	0.113	0.010	2618245
22'344'66'-HeptaCB-(184)	ng/g	<0.00025	0.0098	2610967	<0.000066 (1)	0.010	2618245
22'3455'6-HeptaCB-(185)	ng/g	<0.00043	0.0098	2610967	<0.00025	0.010	2618245
22'34566'-HeptaCB-(186)	ng/g	<0.00026	0.0098	2610967	<0.000088	0.010	2618245
22'34'55'6-HeptaCB-(187)	ng/g	0.266	0.0098	2610967	0.362	0.010	2618245
22'34'566'-HeptaCB-(188)	ng/g	0.0005	0.0098	2610967	<0.00036 (1)	0.010	2618245
233'44'55'-HeptaCB-(189)	ng/g	0.0041	0.0098	2610967	0.005	0.010	2618245
233'44'56-HeptaCB-(190)	ng/g	0.0170	0.0098	2610967	0.037	0.010	2618245
233'44'5'6-HeptaCB-(191)	ng/g	0.0053	0.0098	2610967	0.005	0.010	2618245
233'455'6-HeptaCB-(192)	ng/g	<0.00037	0.0098	2610967	<0.00021	0.010	2618245
22'33'44'55'-OctaCB-(194)	ng/g	0.0671	0.0098	2610967	0.073	0.010	2618245
22'33'44'56-OctaCB-(195)	ng/g	0.0265	0.0098	2610967	0.041	0.010	2618245
22'33'44'56'-OctaCB-(196)	ng/g	0.0382	0.0098	2610967	0.046	0.010	2618245
22'33'44'66'OctaCB-(197)	ng/g	0.0032	0.0098	2610967	0.004	0.010	2618245
OctaCB-(198)+(199)	ng/g	0.090	0.020	2610967	0.130	0.020	2618245
22'33'4566'-OctaCB-(200)	ng/g	0.0084	0.0098	2610967	0.012	0.010	2618245
22'33'45'66'-OctaCB-(201)	ng/g	0.0108	0.0098	2610967	0.015	0.010	2618245
22'33'55'66'-OctaCB-(202)	ng/g	0.0182	0.0098	2610967	0.026	0.010	2618245
22'344'55'6-OctaCB-(203)	ng/g	0.0344	0.0098	2610967	0.061	0.010	2618245
22'344'566'-OctaCB-(204)	ng/g	<0.00039	0.0098	2610967	<0.000096	0.010	2618245
233'44'55'6-OctaCB-(205)	ng/g	0.0031	0.0098	2610967	0.005	0.010	2618245
22'33'44'55'6-NonaCB-(206)	ng/g	0.0172	0.0098	2610967	0.028	0.010	2618245
22'33'44'566'-NonaCB-(207)	ng/g	0.0024	0.0098	2610967	0.005	0.010	2618245
22'33'455'66'-NonaCB-(208)	ng/g	0.0042	0.0098	2610967	0.009	0.010	2618245
DecaCB-(209)	ng/g	0.0092	0.0098	2610967	0.056	0.010	2618245
Total PCB	ng/g	4.38	N/A	2610967	5.59	N/A	2618245

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1D4086
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
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Your P.O. #: 16400NR
Sampler Initials: AR

SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

Maxxam ID		KT0258			KT0264		
Sampling Date		2011/08/25			2011/08/20		
	Units	**11-SED32**	**RDL**	**QC Batch**	**11-SED39**	**RDL**	**QC Batch**
Surrogate Recovery (%)							
C13-2,44'-TriCB-(28)	%	80		2610967	99		2618245
C13-22'33'44'55'6-NonaCB-(206)	%	108		2610967	107		2618245
C13-22'33'44'5-HeptaCB-(170)	%	97		2610967	106		2618245
C13-22'33'455'66'-NonaCB-(208)	%	113		2610967	114		2618245
C13-22'33'55'66'-OctaCB-(202)	%	116		2610967	115		2618245
C13-22'33'55'6-HeptaCB-(178)	%	120		2610967	112		2618245
C13-22'344'55'-HeptaCB-(180)	%	102		2610967	108		2618245
C13-22'34'566'-HeptaCB-(188)	%	123		2610967	115		2618245
C13-22'44'66'-HexaCB-(155)	%	120		2610967	121		2618245
C13-22'466'-PentaCB-(104)	%	96		2610967	94		2618245
C13-22'66'-TetraCB-(54)	%	97		2610967	87		2618245
C13-22'6-TriCB-(19)	%	79		2610967	73		2618245
C13-22'-DiCB-(4)	%	82		2610967	73		2618245
C13-233'44'55'6-OctaCB-(205)	%	98		2610967	107		2618245
C13-233'44'55'-HeptaCB-(189)	%	91		2610967	108		2618245
C13-233'44'-PentaCB-(105)	%	80		2610967	98		2618245
C13-233'55'-PentaCB-(111)	%	94		2610967	92		2618245
C13-23'44'55'-HexaCB-(167)	%	97		2610967	106		2618245
C13-2344'5-PentaCB-(114)	%	80		2610967	99		2618245
C13-23'44'5-PentaCB-(118)	%	83		2610967	100		2618245
C13-2'344'5-PentaCB-(123)	%	81		2610967	98		2618245
C13-2-MonoCB-(1)	%	59		2610967	57		2618245
C13-33'44'55'-HexaCB-(169)	%	82		2610967	65		2618245
C13-33'44'5-PentaCB-(126)	%	81		2610967	95		2618245
C13-33'44'-TetraCB-(77)	%	88		2610967	109		2618245
C13-344'5-TetraCB-(81)	%	89		2610967	107		2618245
C13-344'-TriCB-(37)	%	73		2610967	107		2618245
C13-44'-DiCB-(15)	%	88		2610967	91		2618245
C13-4-MonoCB-(3)	%	62		2610967	63		2618245
C13-DecaCB-(209)	%	119		2610967	117		2618245
C13-HexaCB-(156)+(157)	%	96		2610967	107		2618245

RDL = Reportable Detection Limit
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Maxxam Job #: B1D4086
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Stantec Consulting Ltd
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Site Location: HOPEDALE - GRAD SEDIMENT
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Sampler Initials: AR

Package 1	5.5°C

Each temperature is the average of up to three cooler temperatures taken at receipt

SEMI-VOLATILE ORGANICS BY HRMS (SOIL)

PCB Congeners in Soil (1668A): Samples required dilution due to high pcbs and matrix effects, causing peak shifting.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B1D4086
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Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2601999	Decachlorobiphenyl	2011/09/06	26(1, 2)	70 - 130	93	70 - 130	95	%				
2601999	Total PCB	2011/09/06	56(1, 3)	70 - 130	84	70 - 130	<0.01	mg/kg	NC	50		
2609304	Organic Carbon (TOC)	2011/09/09					<0.2	g/kg	3.4	35	99	75 - 125
2610921	Moisture	2011/09/12							3.8	20		
2610967	C13-2,44'-TriCB-(28)	2011/09/12			93	30 - 135	85	%				
2610967	C13-22'33'44'55'6-NonaCB-(206)	2011/09/12			118	25 - 150	105	%				
2610967	C13-22'33'44'5-HeptaCB-(170)	2011/09/12			103	25 - 150	94	%				
2610967	C13-22'33'455'66'-NonaCB-(208)	2011/09/12			130	25 - 150	114	%				
2610967	C13-22'33'55'66'-OctaCB-(202)	2011/09/12			122	25 - 150	107	%				
2610967	C13-22'33'55'6-HeptaCB-(178)	2011/09/12			142(1)	30 - 135	118	%				
2610967	C13-22'344'55'-HeptaCB-(180)	2011/09/12			106	30 - 135	96	%				
2610967	C13-22'34'566'-HeptaCB-(188)	2011/09/12			136	25 - 150	116	%				
2610967	C13-22'44'66'-HexaCB-(155)	2011/09/12			135	25 - 150	128	%				
2610967	C13-22'466'-PentaCB-(104)	2011/09/12			98	25 - 150	101	%				
2610967	C13-22'66'-TetraCB-(54)	2011/09/12			105	25 - 150	108	%				
2610967	C13-22'6-TriCB-(19)	2011/09/12			90	25 - 150	84	%				
2610967	C13-22'-DiCB-(4)	2011/09/12			93	25 - 150	86	%				
2610967	C13-233'44'55'6-OctaCB-(205)	2011/09/12			110	25 - 150	95	%				
2610967	C13-233'44'55'-HeptaCB-(189)	2011/09/12			93	25 - 150	90	%				
2610967	C13-233'44'-PentaCB-(105)	2011/09/12			93	25 - 150	74	%				
2610967	C13-233'55'-PentaCB-(111)	2011/09/12			108	30 - 135	92	%				
2610967	C13-23'44'55'-HexaCB-(167)	2011/09/12			104	25 - 150	95	%				
2610967	C13-2344'5-PentaCB-(114)	2011/09/12			92	25 - 150	75	%				
2610967	C13-23'44'5-PentaCB-(118)	2011/09/12			95	25 - 150	77	%				
2610967	C13-2'344'5-PentaCB-(123)	2011/09/12			94	25 - 150	77	%				
2610967	C13-2-MonoCB-(1)	2011/09/12			61	15 - 150	59	%				
2610967	C13-33'44'55'-HexaCB-(169)	2011/09/12			94	25 - 150	81	%				
2610967	C13-33'44'5-PentaCB-(126)	2011/09/12			95	25 - 150	77	%				
2610967	C13-33'44'-TetraCB-(77)	2011/09/12			114	25 - 150	85	%				
2610967	C13-344'5-TetraCB-(81)	2011/09/12			114	25 - 150	84	%				
2610967	C13-344'-TriCB-(37)	2011/09/12			101	25 - 150	80	%				
2610967	C13-44'-DiCB-(15)	2011/09/12			98	25 - 150	82	%				
2610967	C13-4-MonoCB-(3)	2011/09/12			57	15 - 150	63	%				
2610967	C13-DecaCB-(209)	2011/09/12			142	25 - 150	120	%				
2610967	C13-HexaCB-(156)+(157)	2011/09/12			107	25 - 150	95	%				
2610967	2-MonoCB-(1)	2011/09/12			87	50 - 150	0.000, RDL=0.010	ng/g				
2610967	4-MonoCB-(3)	2011/09/12			91	50 - 150	<0.00024(4)	ng/g				
2610967	22'-DiCB-(4)	2011/09/12			91	50 - 150	<0.00076(4)	ng/g				
2610967	4,4'-DiCB-(15)	2011/09/12			101	50 - 150	<0.00051	ng/g				

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Maxxam Job #: B1D4086
Report Date: 2011/09/21

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE - GRAD SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

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			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2610967	22'6-TriCB-(19)	2011/09/12			104	50 - 150	0.000, RDL=0.010	ng/g				
2610967	235-TriCB-(23)	2011/09/12			113	50 - 150	<0.000045	ng/g				
2610967	23'5'-TriCB-(34)	2011/09/12			105	50 - 150	<0.000042	ng/g				
2610967	344'-TriCB-(37)	2011/09/12			98	50 - 150	0.000, RDL=0.010	ng/g				
2610967	22'66'-TetraCB-(54)	2011/09/12			107	50 - 150	<0.000071	ng/g				
2610967	33'44'-TetraCB-(77)	2011/09/12			95	50 - 150	0.000, RDL=0.010	ng/g				
2610967	344'5-TetraCB-(81)	2011/09/12			96	50 - 150	<0.00011(4)	ng/g				
2610967	22'466'-PentaCB-(104)	2011/09/12			87	50 - 150	<0.000049	ng/g				
2610967	233'44'-PentaCB-(105)	2011/09/12			102	50 - 150	0.001, RDL=0.010	ng/g				
2610967	2344'5-PentaCB-(114)	2011/09/12			98	50 - 150	<0.00016	ng/g				
2610967	23'44'5-PentaCB-(118)	2011/09/12			105	50 - 150	0.005, RDL=0.010	ng/g				
2610967	23'44'5'-PentaCB-(123)	2011/09/12			102	50 - 150	<0.00012	ng/g				
2610967	33'44'5-PentaCB-(126)	2011/09/12			98	50 - 150	<0.00017	ng/g				
2610967	22'44'66'-HexaCB-(155)	2011/09/12			99	50 - 150	<0.000031	ng/g				
2610967	HexaCB-(156)+(157)	2011/09/12			101	50 - 150	<0.0020(4)	ng/g				
2610967	23'44'55'-HexaCB-(167)	2011/09/12			99	50 - 150	<0.00085(4)	ng/g				
2610967	33'44'55'-HexaCB-(169)	2011/09/12			101	50 - 150	<0.000082	ng/g				
2610967	22'33'44'5-HeptaCB-(170)	2011/09/12			107	50 - 150	0.007, RDL=0.010	ng/g				
2610967	HeptaCB-(180)+(193)	2011/09/12			102	50 - 150	0.013, RDL=0.020	ng/g				
2610967	22'344'56'-HeptaCB-(182)	2011/09/12			108	50 - 150	<0.00011	ng/g				
2610967	22'34'55'6-HeptaCB-(187)	2011/09/12			114	50 - 150	0.008, RDL=0.010	ng/g				
2610967	22'34'566'-HeptaCB-(188)	2011/09/12			99	50 - 150	<0.000086	ng/g				
2610967	233'44'55'-HeptaCB-(189)	2011/09/12			94	50 - 150	<0.00032(4)	ng/g				
2610967	22'33'55'66'-OctaCB-(202)	2011/09/12			102	50 - 150	0.000, RDL=0.010	ng/g				
2610967	233'44'55'6-OctaCB-(205)	2011/09/12			98	50 - 150	<0.00011	ng/g				
2610967	22'33'44'55'6-NonaCB-(206)	2011/09/12			100	50 - 150	<0.00039	ng/g				
2610967	22'33'455'66'-NonaCB-(208)	2011/09/12			93	50 - 150	<0.00039	ng/g				
2610967	DecaCB-(209)	2011/09/12			94	50 - 150	<0.00013	ng/g				
2610967	3-MonoCB-(2)	2011/09/12					<0.00012	ng/g				
2610967	2,3-DiCB-(5)	2011/09/12					<0.00039	ng/g				
2610967	2,3'-DiCB-(6)	2011/09/12					<0.00035	ng/g				
2610967	2,4-DiCB-(7)	2011/09/12					<0.00037	ng/g				
2610967	2,4'-DiCB-(8)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	2,5-DiCB-(9)	2011/09/12					<0.00034	ng/g				
2610967	2,6-DiCB-(10)	2011/09/12					<0.00050	ng/g				
2610967	3,3'-DiCB-(11)	2011/09/12					0.004, RDL=0.010	ng/g				
2610967	DiCB-(12)+(13)	2011/09/12					<0.00036	ng/g				
2610967	3,5-DiCB-(14)	2011/09/12					<0.00032	ng/g				
2610967	22'3-TriCB-(16)	2011/09/12					<0.00040(4)	ng/g				

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			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2610967	22'4-TriCB-(17)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	TriCB-(18)+(30)	2011/09/12					0.001, RDL=0.020	ng/g				
2610967	TriCB-(20) + (28)	2011/09/12					0.002, RDL=0.020	ng/g				
2610967	TriCB-(21)+(33)	2011/09/12					0.001, RDL=0.020	ng/g				
2610967	234'-TriCB-(22)	2011/09/12					<0.00051(4)	ng/g				
2610967	236-TriCB-(24)	2011/09/12					<0.00012	ng/g				
2610967	23'4-TriCB-(25)	2011/09/12					<0.000075(4)	ng/g				
2610967	TriCB-(26)+(29)	2011/09/12					<0.00021(4)	ng/g				
2610967	23'6-TriCB-(27)	2011/09/12					<0.00011	ng/g				
2610967	24'5-TriCB-(31)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	24'6-TriCB-(32)	2011/09/12					<0.00038(4)	ng/g				
2610967	33'4-TriCB-(35)	2011/09/12					<0.000042	ng/g				
2610967	33'5-TriCB-(36)	2011/09/12					<0.000036	ng/g				
2610967	345-TriCB-(38)	2011/09/12					<0.000041	ng/g				
2610967	34'5-TriCB-(39)	2011/09/12					<0.000040	ng/g				
2610967	TetraCB-(40)+(41)+(71)	2011/09/12					<0.00030(4)	ng/g				
2610967	22'34'-TetraCB-(42)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	22'35-TetraCB-(43)	2011/09/12					<0.00011	ng/g				
2610967	TetraCB-(44)+(47)+(65)	2011/09/12					0.001, RDL=0.030	ng/g				
2610967	TetraCB-(45)+(51)	2011/09/12					<0.00021(4)	ng/g				
2610967	22'36'-TetraCB-(46)	2011/09/12					<0.00012	ng/g				
2610967	22'45-TetraCB-(48)	2011/09/12					<0.00020(4)	ng/g				
2610967	TetraCB-(49)+TetraCB-(69)	2011/09/12					<0.00041(4)	ng/g				
2610967	TetraCB-(50)+(53)	2011/09/12					<0.00018(4)	ng/g				
2610967	22'55'-TetraCB-(52)	2011/09/12					0.003, RDL=0.010	ng/g				
2610967	233'4-TetraCB-(55)	2011/09/12					<0.00010	ng/g				
2610967	233'4'-Tetra CB(56)	2011/09/12					<0.00021(4)	ng/g				
2610967	233'5-TetraCB-(57)	2011/09/12					<0.000096	ng/g				
2610967	233'5'-TetraCB-(58)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	TetraCB-(59)+(62)+(75)	2011/09/12					<0.000082	ng/g				
2610967	2344'-TetraCB -(60)	2011/09/12					<0.000082	ng/g				
2610967	TetraCB-(61)+(70)+(74)+(76)	2011/09/12					0.001, RDL=0.040	ng/g				
2610967	234'5-TetraCB-(63)	2011/09/12					<0.000090	ng/g				
2610967	234'6-TetraCB-(64)	2011/09/12					<0.00037(4)	ng/g				
2610967	23'44'-TetraCB-(66)	2011/09/12					<0.00053(4)	ng/g				
2610967	23'45-TetraCB-(67)	2011/09/12					<0.000087	ng/g				
2610967	23'45'-TetraCB-(68)	2011/09/12					<0.000091	ng/g				
2610967	23'55'-TetraCB-(72)	2011/09/12					<0.000090	ng/g				
2610967	23'5'6-TetraCB-(73)	2011/09/12					<0.000088	ng/g				

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			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2610967	33'45-TetraCB-(78)	2011/09/12					<0.000096	ng/g				
2610967	33'45'-TetraCB(79)	2011/09/12					<0.000086	ng/g				
2610967	33'55'-TetraCB-(80)	2011/09/12					<0.000085	ng/g				
2610967	22'33'4-PentaCB-(82)	2011/09/12					<0.000045	ng/g				
2610967	PentaCB-(83)+(99)	2011/09/12					0.001, RDL=0.020	ng/g				
2610967	22'33'6-PentaCB-(84)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	PentaCB-(85)+(116)+(117)	2011/09/12					<0.000088(4)	ng/g				
2610967	PentaCB-(86)(87)(97)(109)(119)(125)	2011/09/12					0.003, RDL=0.060	ng/g				
2610967	PentaCB-(88)+(91)	2011/09/12					<0.00019(4)	ng/g				
2610967	22'346'-PentaCB-(89)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	PentaCB-(90)+(101)+(113)	2011/09/12					0.013, RDL=0.030	ng/g				
2610967	22'355'-PentaCB-(92)	2011/09/12					0.002, RDL=0.010	ng/g				
2610967	PentaCB-(93)+(98)+(100)+(102)	2011/09/12					<0.000038	ng/g				
2610967	22'356'-PentaCB-(94)	2011/09/12					<0.000043	ng/g				
2610967	22'35'6-PentaCB-(95)	2011/09/12					0.010, RDL=0.010	ng/g				
2610967	22'366'-PentaCB-(96)	2011/09/12					<0.000063	ng/g				
2610967	22'45'6-PentaCB-(103)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	233'45-PentaCB-(106)	2011/09/12					<0.000092	ng/g				
2610967	233'4'5-PentaCB-(107)	2011/09/12					<0.000096	ng/g				
2610967	PentaCB-(108)+(124)	2011/09/12					<0.00013(4)	ng/g				
2610967	PentaCB-(110)+(115)	2011/09/12					0.007, RDL=0.020	ng/g				
2610967	233'55'-PentaCB-(111)	2011/09/12					<0.000030	ng/g				
2610967	233'56-PentaCB-(112)	2011/09/12					<0.000030	ng/g				
2610967	23'455'-PentaCB-(120)	2011/09/12					<0.000028	ng/g				
2610967	23'45'6-PentaCB-(121)	2011/09/12					<0.000029	ng/g				
2610967	233'4'5'-PentaCB-(122)	2011/09/12					<0.00010	ng/g				
2610967	33'455'-PentaCB-(127)	2011/09/12					<0.000090	ng/g				
2610967	HexaCB-(128)+(166)	2011/09/12					<0.0017(4)	ng/g				
2610967	HexaCB-(129)+(138)+(163)	2011/09/12					0.023, RDL=0.030	ng/g				
2610967	22'33'45'-HexaCB-(130)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	22'33'46-HexaCB-(131)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	22'33'46'-HexaCB-(132)	2011/09/12					0.007, RDL=0.010	ng/g				
2610967	22'33'55'-HexaCB-(133)	2011/09/12					<0.00037(4)	ng/g				
2610967	HexaCB-(134)+(143)	2011/09/12					0.001, RDL=0.020	ng/g				
2610967	HexaCB-(135)+(151)	2011/09/12					0.010, RDL=0.020	ng/g				
2610967	22'33'66'-HexaCB-(136)	2011/09/12					0.003, RDL=0.010	ng/g				
2610967	22'344'5-HexaCB-(137)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	HexaCB-(139)+(140)	2011/09/12					<0.000049(4)	ng/g				
2610967	22'3455'-HexaCB-(141)	2011/09/12					0.005, RDL=0.010	ng/g				

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QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2610967	22'3456-HexaCB-(142)	2011/09/12					<0.000090	ng/g				
2610967	22'345'6-HexaCB-(144)	2011/09/12					<0.00099(4)	ng/g				
2610967	22'3466'-HexaCB-(145)	2011/09/12					<0.000040	ng/g				
2610967	22'34'55'-HexaCB-(146)	2011/09/12					0.003, RDL=0.010	ng/g				
2610967	HexaCB-(147)+(149)	2011/09/12					0.021, RDL=0.020	ng/g				
2610967	22'34'56'-HexaCB-(148)	2011/09/12					<0.000051	ng/g				
2610967	22'34'66'-HexaCB-(150)	2011/09/12					<0.000038	ng/g				
2610967	22'3566'-HexaCB-(152)	2011/09/12					<0.000033	ng/g				
2610967	HexaCB-(153)+(168)	2011/09/12					0.023, RDL=0.020	ng/g				
2610967	22'44'56'-HexaCB-(154)	2011/09/12					<0.000044	ng/g				
2610967	233'44'6-HexaCB-(158)	2011/09/12					0.002, RDL=0.010	ng/g				
2610967	233'455'-HexaCB-(159)	2011/09/12					<0.00025(4)	ng/g				
2610967	233'456-HexaCB-(160)	2011/09/12					<0.000068	ng/g				
2610967	233'45'6-HexaCB-(161)	2011/09/12					<0.000062	ng/g				
2610967	233'4'55'-HexaCB-(162)	2011/09/12					<0.000083	ng/g				
2610967	233'4'5'6-HexaCB-(164)	2011/09/12					0.002, RDL=0.010	ng/g				
2610967	233'55'6-HexaCB-(165)	2011/09/12					<0.000068	ng/g				
2610967	HeptaCB-(171)+(173)	2011/09/12					0.003, RDL=0.020	ng/g				
2610967	22'33'455'-HeptaCB-(172)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	22'33'456'-HeptaCB-(174)	2011/09/12					0.007, RDL=0.010	ng/g				
2610967	22'33'45'6-HeptaCB-(175)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	22'33'466'-HeptaCB-(176)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	22'33'45'6'-HeptaCB-(177)	2011/09/12					0.004, RDL=0.010	ng/g				
2610967	22'33'55'6-HeptaCB-(178)	2011/09/12					0.002, RDL=0.010	ng/g				
2610967	22'33'566'-HeptaCB-(179)	2011/09/12					0.003, RDL=0.010	ng/g				
2610967	22'344'56-HeptaCB-(181)	2011/09/12					<0.00022	ng/g				
2610967	22'344'5'6-HeptaCB-(183)	2011/09/12					0.004, RDL=0.010	ng/g				
2610967	22'344'66'-HeptaCB-(184)	2011/09/12					<0.000078	ng/g				
2610967	22'3455'6-HeptaCB-(185)	2011/09/12					0.000, RDL=0.010	ng/g				
2610967	22'34566'-HeptaCB-(186)	2011/09/12					<0.000081	ng/g				
2610967	233'44'56-HeptaCB-(190)	2011/09/12					<0.0011(4)	ng/g				
2610967	233'44'5'6-HeptaCB-(191)	2011/09/12					<0.00018	ng/g				
2610967	233'455'6-HeptaCB-(192)	2011/09/12					<0.00019	ng/g				
2610967	22'33'44'55'-OctaCB-(194)	2011/09/12					0.003, RDL=0.010	ng/g				
2610967	22'33'44'56-OctaCB-(195)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	22'33'44'56'-OctaCB-(196)	2011/09/12					0.002, RDL=0.010	ng/g				
2610967	22'33'44'66'OctaCB-(197)	2011/09/12					<0.000093	ng/g				
2610967	OctaCB-(198)+(199)	2011/09/12					<0.0024(4)	ng/g				
2610967	22'33'4566'-OctaCB-(200)	2011/09/12					0.000, RDL=0.010	ng/g				

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QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2610967	22'33'45'66'-OctaCB-(201)	2011/09/12					<0.00034(4)	ng/g				
2610967	22'344'55'6-OctaCB-(203)	2011/09/12					0.001, RDL=0.010	ng/g				
2610967	22'344'566'-OctaCB-(204)	2011/09/12					<0.000094	ng/g				
2610967	22'33'44'566'-NonaCB-(207)	2011/09/12					<0.00036	ng/g				
2610967	Total PCB	2011/09/12					0.223, RDL=N/A	ng/g				
2618245	C13-2,44'-TriCB-(28)	2011/09/19			107	30 - 135	86	%				
2618245	C13-22'33'44'55'6-NonaCB-(206)	2011/09/19			111	25 - 150	111	%				
2618245	C13-22'33'44'5-HeptaCB-(170)	2011/09/19			103	25 - 150	103	%				
2618245	C13-22'33'455'66'-NonaCB-(208)	2011/09/19			119	25 - 150	116	%				
2618245	C13-22'33'55'66'-OctaCB-(202)	2011/09/19			113	25 - 150	112	%				
2618245	C13-22'33'55'6-HeptaCB-(178)	2011/09/19			118	30 - 135	114	%				
2618245	C13-22'344'55'-HeptaCB-(180)	2011/09/19			108	30 - 135	106	%				
2618245	C13-22'34'566'-HeptaCB-(188)	2011/09/19			116	25 - 150	114	%				
2618245	C13-22'44'66'-HexaCB-(155)	2011/09/19			128	25 - 150	109	%				
2618245	C13-22'466'-PentaCB-(104)	2011/09/19			104	25 - 150	89	%				
2618245	C13-22'66'-TetraCB-(54)	2011/09/19			92	25 - 150	69	%				
2618245	C13-22'6-TriCB-(19)	2011/09/19			69	25 - 150	47	%				
2618245	C13-22'-DiCB-(4)	2011/09/19			72	25 - 150	48	%				
2618245	C13-233'44'55'6-OctaCB-(205)	2011/09/19			105	25 - 150	103	%				
2618245	C13-233'44'55'-HeptaCB-(189)	2011/09/19			103	25 - 150	104	%				
2618245	C13-233'44'-PentaCB-(105)	2011/09/19			101	25 - 150	99	%				
2618245	C13-233'55'-PentaCB-(111)	2011/09/19			98	30 - 135	94	%				
2618245	C13-23'44'55'-HexaCB-(167)	2011/09/19			108	25 - 150	109	%				
2618245	C13-2344'5-PentaCB-(114)	2011/09/19			99	25 - 150	97	%				
2618245	C13-23'44'5-PentaCB-(118)	2011/09/19			100	25 - 150	99	%				
2618245	C13-2'344'5-PentaCB-(123)	2011/09/19			101	25 - 150	98	%				
2618245	C13-2-MonoCB-(1)	2011/09/19			60	15 - 150	39	%				
2618245	C13-33'44'55'-HexaCB-(169)	2011/09/19			66	25 - 150	61	%				
2618245	C13-33'44'5-PentaCB-(126)	2011/09/19			92	25 - 150	92	%				
2618245	C13-33'44'-TetraCB-(77)	2011/09/19			102	25 - 150	96	%				
2618245	C13-344'5-TetraCB-(81)	2011/09/19			103	25 - 150	96	%				
2618245	C13-344'-TriCB-(37)	2011/09/19			107	25 - 150	90	%				
2618245	C13-44'-DiCB-(15)	2011/09/19			89	25 - 150	66	%				
2618245	C13-4-MonoCB-(3)	2011/09/19			65	15 - 150	43	%				
2618245	C13-DecaCB-(209)	2011/09/19			121	25 - 150	118	%				
2618245	C13-HexaCB-(156)+(157)	2011/09/19			111	25 - 150	105	%				
2618245	2-MonoCB-(1)	2011/09/19			100	50 - 150	0.000, RDL=0.010	ng/g				
2618245	4-MonoCB-(3)	2011/09/19			101	50 - 150	<0.00015	ng/g				
2618245	22'-DiCB-(4)	2011/09/19			99	50 - 150	<0.0013	ng/g				

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			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2618245	4,4'-DiCB-(15)	2011/09/19			108	50 - 150	<0.0011	ng/g				
2618245	22'6-TriCB-(19)	2011/09/19			113	50 - 150	<0.00030	ng/g				
2618245	235-TriCB-(23)	2011/09/19			107	50 - 150	<0.00010	ng/g				
2618245	23'5'-TriCB-(34)	2011/09/19			99	50 - 150	<0.000097	ng/g				
2618245	344'-TriCB-(37)	2011/09/19			104	50 - 150	<0.00019(4)	ng/g				
2618245	22'66'-TetraCB-(54)	2011/09/19			107	50 - 150	<0.00016	ng/g				
2618245	33'44'-TetraCB-(77)	2011/09/19			107	50 - 150	<0.00010	ng/g				
2618245	344'5-TetraCB-(81)	2011/09/19			105	50 - 150	<0.000098	ng/g				
2618245	22'466'-PentaCB-(104)	2011/09/19			97	50 - 150	<0.000091	ng/g				
2618245	233'44'-PentaCB-(105)	2011/09/19			106	50 - 150	0.001, RDL=0.010	ng/g				
2618245	2344'5-PentaCB-(114)	2011/09/19			104	50 - 150	<0.000072	ng/g				
2618245	23'44'5-PentaCB-(118)	2011/09/19			113	50 - 150	0.005, RDL=0.010	ng/g				
2618245	23'44'5'-PentaCB-(123)	2011/09/19			107	50 - 150	<0.000073	ng/g				
2618245	33'44'5-PentaCB-(126)	2011/09/19			107	50 - 150	<0.000072	ng/g				
2618245	22'44'66'-HexaCB-(155)	2011/09/19			99	50 - 150	<0.000058	ng/g				
2618245	HexaCB-(156)+(157)	2011/09/19			102	50 - 150	0.002, RDL=0.020	ng/g				
2618245	23'44'55'-HexaCB-(167)	2011/09/19			102	50 - 150	0.001, RDL=0.010	ng/g				
2618245	33'44'55'-HexaCB-(169)	2011/09/19			103	50 - 150	<0.00011	ng/g				
2618245	22'33'44'5-HeptaCB-(170)	2011/09/19			113	50 - 150	0.005, RDL=0.010	ng/g				
2618245	HeptaCB-(180)+(193)	2011/09/19			107	50 - 150	0.010, RDL=0.020	ng/g				
2618245	22'344'56'-HeptaCB-(182)	2011/09/19			108	50 - 150	<0.00013	ng/g				
2618245	22'34'55'6-HeptaCB-(187)	2011/09/19			112	50 - 150	0.005, RDL=0.010	ng/g				
2618245	22'34'566'-HeptaCB-(188)	2011/09/19			98	50 - 150	<0.000099	ng/g				
2618245	233'44'55'-HeptaCB-(189)	2011/09/19			101	50 - 150	0.000, RDL=0.010	ng/g				
2618245	22'33'55'66'-OctaCB-(202)	2011/09/19			106	50 - 150	<0.00016(4)	ng/g				
2618245	233'44'55'6-OctaCB-(205)	2011/09/19			104	50 - 150	<0.000086	ng/g				
2618245	22'33'44'55'6-NonaCB-(206)	2011/09/19			102	50 - 150	<0.00048	ng/g				
2618245	22'33'455'66'-NonaCB-(208)	2011/09/19			95	50 - 150	<0.00048	ng/g				
2618245	DecaCB-(209)	2011/09/19			95	50 - 150	<0.00022	ng/g				
2618245	3-MonoCB-(2)	2011/09/19					<0.00016	ng/g				
2618245	2,3-DiCB-(5)	2011/09/19					<0.00080	ng/g				
2618245	2,3'-DiCB-(6)	2011/09/19					<0.00076	ng/g				
2618245	2,4-DiCB-(7)	2011/09/19					<0.00076	ng/g				
2618245	2,4'-DiCB-(8)	2011/09/19					<0.00073(4)	ng/g				
2618245	2,5-DiCB-(9)	2011/09/19					<0.00075	ng/g				
2618245	2,6-DiCB-(10)	2011/09/19					<0.0014	ng/g				
2618245	3,3'-DiCB-(11)	2011/09/19					0.002, RDL=0.010	ng/g				
2618245	DiCB-(12)+(13)	2011/09/19					<0.00078	ng/g				
2618245	3,5-DiCB-(14)	2011/09/19					<0.00075	ng/g				

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			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2618245	22'3-TriCB-(16)	2011/09/19					<0.00036	ng/g				
2618245	22'4-TriCB-(17)	2011/09/19					<0.00037	ng/g				
2618245	TriCB-(18)+(30)	2011/09/19					0.001, RDL=0.020	ng/g				
2618245	TriCB-(20) + (28)	2011/09/19					0.001, RDL=0.020	ng/g				
2618245	TriCB-(21)+(33)	2011/09/19					0.000, RDL=0.020	ng/g				
2618245	234'-TriCB-(22)	2011/09/19					<0.00036(4)	ng/g				
2618245	236-TriCB-(24)	2011/09/19					<0.00029	ng/g				
2618245	23'4-TriCB-(25)	2011/09/19					<0.000091	ng/g				
2618245	TriCB-(26)+(29)	2011/09/19					<0.00014(4)	ng/g				
2618245	23'6-TriCB-(27)	2011/09/19					<0.00026	ng/g				
2618245	24'5-TriCB-(31)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	24'6-TriCB-(32)	2011/09/19					<0.00024	ng/g				
2618245	33'4-TriCB-(35)	2011/09/19					<0.000099	ng/g				
2618245	33'5-TriCB-(36)	2011/09/19					<0.000088	ng/g				
2618245	345-TriCB-(38)	2011/09/19					<0.00010	ng/g				
2618245	34'5-TriCB-(39)	2011/09/19					<0.000096	ng/g				
2618245	TetraCB-(40)+(41)+(71)	2011/09/19					<0.00026(4)	ng/g				
2618245	22'34'-TetraCB-(42)	2011/09/19					<0.00022	ng/g				
2618245	22'35-TetraCB-(43)	2011/09/19					<0.00022	ng/g				
2618245	TetraCB-(44)+(47)+(65)	2011/09/19					<0.00088(4)	ng/g				
2618245	TetraCB-(45)+(51)	2011/09/19					<0.00022(4)	ng/g				
2618245	22'36'-TetraCB-(46)	2011/09/19					<0.00024	ng/g				
2618245	22'45-TetraCB-(48)	2011/09/19					<0.00020	ng/g				
2618245	TetraCB-(49)+TetraCB-(69)	2011/09/19					<0.00035(4)	ng/g				
2618245	TetraCB-(50)+(53)	2011/09/19					<0.00020	ng/g				
2618245	22'55'-TetraCB-(52)	2011/09/19					0.003, RDL=0.010	ng/g				
2618245	233'4-TetraCB-(55)	2011/09/19					<0.000086	ng/g				
2618245	233'4'-Tetra CB(56)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	233'5-TetraCB-(57)	2011/09/19					<0.000083	ng/g				
2618245	233'5'-TetraCB-(58)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	TetraCB-(59)+(62)+(75)	2011/09/19					<0.00015	ng/g				
2618245	2344'-TetraCB -(60)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	TetraCB-(61)+(70)+(74)+(76)	2011/09/19					0.001, RDL=0.040	ng/g				
2618245	234'5-TetraCB-(63)	2011/09/19					<0.000077	ng/g				
2618245	234'6-TetraCB-(64)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	23'44'-TetraCB-(66)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	23'45-TetraCB-(67)	2011/09/19					<0.000077	ng/g				
2618245	23'45'-TetraCB-(68)	2011/09/19					<0.000077	ng/g				
2618245	23'55'-TetraCB-(72)	2011/09/19					<0.000077	ng/g				

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QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2618245	23'5'6-TetraCB-(73)	2011/09/19					<0.00015	ng/g				
2618245	33'45-TetraCB-(78)	2011/09/19					<0.000084	ng/g				
2618245	33'45'-TetraCB(79)	2011/09/19					<0.000073	ng/g				
2618245	33'55'-TetraCB-(80)	2011/09/19					<0.000074	ng/g				
2618245	22'33'4-PentaCB-(82)	2011/09/19					<0.00018	ng/g				
2618245	PentaCB-(83)+(99)	2011/09/19					0.001, RDL=0.020	ng/g				
2618245	22'33'6-PentaCB-(84)	2011/09/19					<0.00079(4)	ng/g				
2618245	PentaCB-(85)+(116)+(117)	2011/09/19					<0.00012	ng/g				
2618245	PentaCB-(86)(87)(97)(109)(119)(125)	2011/09/19					0.003, RDL=0.060	ng/g				
2618245	PentaCB-(88)+(91)	2011/09/19					<0.00014(4)	ng/g				
2618245	22'346'-PentaCB-(89)	2011/09/19					<0.00016	ng/g				
2618245	PentaCB-(90)+(101)+(113)	2011/09/19					0.015, RDL=0.030	ng/g				
2618245	22'355'-PentaCB-(92)	2011/09/19					0.002, RDL=0.010	ng/g				
2618245	PentaCB-(93)+(98)+(100)+(102)	2011/09/19					<0.00014	ng/g				
2618245	22'356'-PentaCB-(94)	2011/09/19					<0.00016	ng/g				
2618245	22'35'6-PentaCB-(95)	2011/09/19					0.011, RDL=0.010	ng/g				
2618245	22'366'-PentaCB-(96)	2011/09/19					<0.00013	ng/g				
2618245	22'45'6-PentaCB-(103)	2011/09/19					<0.00013	ng/g				
2618245	233'45-PentaCB-(106)	2011/09/19					<0.000067	ng/g				
2618245	233'4'5-PentaCB-(107)	2011/09/19					<0.000060	ng/g				
2618245	PentaCB-(108)+(124)	2011/09/19					0.000, RDL=0.020	ng/g				
2618245	PentaCB-(110)+(115)	2011/09/19					0.008, RDL=0.020	ng/g				
2618245	233'55'-PentaCB-(111)	2011/09/19					<0.00011	ng/g				
2618245	233'56-PentaCB-(112)	2011/09/19					<0.00012	ng/g				
2618245	23'455'-PentaCB-(120)	2011/09/19					<0.00011	ng/g				
2618245	23'45'6-PentaCB-(121)	2011/09/19					<0.00011	ng/g				
2618245	233'4'5'-PentaCB-(122)	2011/09/19					<0.000072	ng/g				
2618245	33'455'-PentaCB-(127)	2011/09/19					<0.000065	ng/g				
2618245	HexaCB-(128)+(166)	2011/09/19					<0.0016(4)	ng/g				
2618245	HexaCB-(129)+(138)+(163)	2011/09/19					0.024, RDL=0.030	ng/g				
2618245	22'33'45'-HexaCB-(130)	2011/09/19					<0.00095(4)	ng/g				
2618245	22'33'46-HexaCB-(131)	2011/09/19					<0.00063	ng/g				
2618245	22'33'46'-HexaCB-(132)	2011/09/19					0.008, RDL=0.010	ng/g				
2618245	22'33'55'-HexaCB-(133)	2011/09/19					<0.00059	ng/g				
2618245	HexaCB-(134)+(143)	2011/09/19					0.001, RDL=0.020	ng/g				
2618245	HexaCB-(135)+(151)	2011/09/19					0.010, RDL=0.020	ng/g				
2618245	22'33'66'-HexaCB-(136)	2011/09/19					0.004, RDL=0.010	ng/g				
2618245	22'344'5-HexaCB-(137)	2011/09/19					<0.00058	ng/g				
2618245	HexaCB-(139)+(140)	2011/09/19					<0.00055	ng/g				

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			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2618245	22'3455'-HexaCB-(141)	2011/09/19					0.006, RDL=0.010	ng/g				
2618245	22'3456-HexaCB-(142)	2011/09/19					<0.00064	ng/g				
2618245	22'345'6-HexaCB-(144)	2011/09/19					0.002, RDL=0.010	ng/g				
2618245	22'3466'-HexaCB-(145)	2011/09/19					<0.000083	ng/g				
2618245	22'34'55'-HexaCB-(146)	2011/09/19					0.004, RDL=0.010	ng/g				
2618245	HexaCB-(147)+(149)	2011/09/19					0.021, RDL=0.020	ng/g				
2618245	22'34'56'-HexaCB-(148)	2011/09/19					<0.00011	ng/g				
2618245	22'34'66'-HexaCB-(150)	2011/09/19					<0.000077	ng/g				
2618245	22'3566'-HexaCB-(152)	2011/09/19					<0.000078	ng/g				
2618245	HexaCB-(153)+(168)	2011/09/19					0.022, RDL=0.020	ng/g				
2618245	22'44'56'-HexaCB-(154)	2011/09/19					<0.000091	ng/g				
2618245	233'44'6-HexaCB-(158)	2011/09/19					0.003, RDL=0.010	ng/g				
2618245	233'455'-HexaCB-(159)	2011/09/19					<0.00010	ng/g				
2618245	233'456-HexaCB-(160)	2011/09/19					<0.00046	ng/g				
2618245	233'45'6-HexaCB-(161)	2011/09/19					<0.00043	ng/g				
2618245	233'4'55'-HexaCB-(162)	2011/09/19					<0.00011	ng/g				
2618245	233'4'5'6-HexaCB-(164)	2011/09/19					0.002, RDL=0.010	ng/g				
2618245	233'55'6-HexaCB-(165)	2011/09/19					<0.00048	ng/g				
2618245	HeptaCB-(171)+(173)	2011/09/19					0.002, RDL=0.020	ng/g				
2618245	22'33'455'-HeptaCB-(172)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	22'33'456'-HeptaCB-(174)	2011/09/19					0.005, RDL=0.010	ng/g				
2618245	22'33'45'6-HeptaCB-(175)	2011/09/19					<0.00028(4)	ng/g				
2618245	22'33'466'-HeptaCB-(176)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	22'33'45'6'-HeptaCB-(177)	2011/09/19					<0.0027(4)	ng/g				
2618245	22'33'55'6-HeptaCB-(178)	2011/09/19					<0.00095(4)	ng/g				
2618245	22'33'566'-HeptaCB-(179)	2011/09/19					<0.0018(4)	ng/g				
2618245	22'344'56-HeptaCB-(181)	2011/09/19					<0.00026	ng/g				
2618245	22'344'5'6-HeptaCB-(183)	2011/09/19					0.003, RDL=0.010	ng/g				
2618245	22'344'66'-HeptaCB-(184)	2011/09/19					<0.000092	ng/g				
2618245	22'3455'6-HeptaCB-(185)	2011/09/19					<0.00026	ng/g				
2618245	22'34566'-HeptaCB-(186)	2011/09/19					<0.00010	ng/g				
2618245	233'44'56-HeptaCB-(190)	2011/09/19					<0.00091(4)	ng/g				
2618245	233'44'5'6-HeptaCB-(191)	2011/09/19					0.000, RDL=0.010	ng/g				
2618245	233'455'6-HeptaCB-(192)	2011/09/19					<0.00023	ng/g				
2618245	22'33'44'55'-OctaCB-(194)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	22'33'44'56-OctaCB-(195)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	22'33'44'56'-OctaCB-(196)	2011/09/19					<0.00073(4)	ng/g				
2618245	22'33'44'66'OctaCB-(197)	2011/09/19					<0.00012	ng/g				
2618245	OctaCB-(198)+(199)	2011/09/19					<0.00097(4)	ng/g				

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QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2618245	22'33'4566'-OctaCB-(200)	2011/09/19					<0.00011	ng/g				
2618245	22'33'45'66'-OctaCB-(201)	2011/09/19					<0.00017(4)	ng/g				
2618245	22'344'55'6-OctaCB-(203)	2011/09/19					0.001, RDL=0.010	ng/g				
2618245	22'344'566'-OctaCB-(204)	2011/09/19					<0.00011	ng/g				
2618245	22'33'44'566'-NonaCB-(207)	2011/09/19					<0.00043	ng/g				
2618245	Total PCB	2011/09/19					0.202, RDL=N/A	ng/g				

N/A = Not Applicable
RDL = Reportable Detection Limit
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) - Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.
(2) - PCB surrogate(s) not within acceptance limits. Analysis was repeated with similar results.
(3) - Matrix Spike: results are outside acceptance limit. Analysis was repeated with similar results.
(4) - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Validation Signature Page

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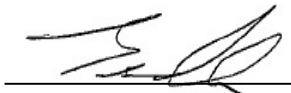
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



BRAD NEWMAN, Scientific Specialist

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MIKE MACGILLIVRAY, Scientific Specialist (Inorganics)

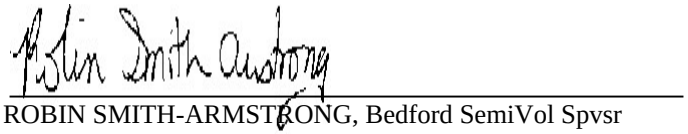
ROBIN MACDONALD, Scientific Specialist (Organics)

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Validation Signature Page

Maxxam Job #: B1D4086

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



ROBIN SMITH-ARMSTRONG, Bedford SemiVol Spvsr

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Your P.O. #: 16300R-40
Your Project #: 121411777.210
Site Location: HOPEDALE GRAB SEDIMENT/FLUX
Your C.O.C. #: ES334111

Attention: Jim Slade
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/10/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1F3574
Received: 2011/10/04, 10:28

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Moisture	8	N/A	2011/10/04	ATL SOP 00001 R3	MOE Handbook 1983
PCB/DDT in Soil by GC-ECD	8	2011/10/06	2011/10/11	ATL SOP 00106 R4	Based EPA8082
Total Organic Carbon in Soil	8	2011/10/11	2011/10/11	ATL SOP 00044 R4/00045 R4	LECO 203-601-224

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PCBs in water by GC/ECD	2	2011/10/04	2011/10/07	ATL SOP 00107 R4	Based on EPA8082
Total Suspended Solids	2	N/A	2011/10/05	ATL SOP 00007 R3	based on EPA 160.2
Turbidity	2	N/A	2011/10/11	ATL SOP 00011 R5	based on EPA 180.1

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

==========

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Total cover pages: 1

Maxxam Job #: B1F3574
Report Date: 2011/10/12

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE GRAB SEDIMENT/FLUX
Your P.O. #: 16300R-40
Sampler Initials: AR

RESULTS OF ANALYSES OF SOIL

Maxxam ID		LD2022	LD2023		LD2024		
Sampling Date		2011/09/27	2011/09/27		2011/09/27		
	Units	**11-SED51**	**11-SED37**	**RDL**	**11-SED46**	**RDL**	**QC Batch**
Inorganics							
Moisture	%	30	14	1	27	1	2636582
Organic Carbon (TOC)	g/kg	5.9	2.9	0.2	7.4	0.3	2642560

Maxxam ID		LD2025	LD2026		LD2027		LD2028		LD2029		
Sampling Date		2011/09/27	2011/09/27		2011/09/27		2011/09/28		2011/09/28		
	Units	**11-SED56**	**11-SED57**	**RDL**	**11-SED53**	**RDL**	**11-SED61**	**RDL**	**11-SED62**	**RDL**	**QC Batch**
Inorganics											
Moisture	%	17	27	1	43	1	37	1	35	1	2636582
Organic Carbon (TOC)	g/kg	4.0	4.1	0.2	9.3	0.8	8	1	8.7	0.8	2642560

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		LD2022	LD2023	LD2024	LD2025	LD2026	LD2027	LD2028	LD2029	LD2029		
Sampling Date		2011/09/27	2011/09/27	2011/09/27	2011/09/27	2011/09/27	2011/09/27	2011/09/28	2011/09/28	2011/09/28		
	Units	**11-SED51**	**11-SED37**	**11-SED46**	**11-SED56**	**11-SED57**	**11-SED53**	**11-SED61**	**11-SED62**	**11-SED62 Lab-Dup**	**RDL**	**QC Batch**
PCBs												
Total PCB	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	2639036
Surrogate Recovery (%)												
Decachlorobiphenyl	%	79	91	82	91	87	84	89	101	83		2639036

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1F3574
Report Date: 2011/10/12

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE GRAB SEDIMENT/FLUX
Your P.O. #: 16300R-40
Sampler Initials: AR

RESULTS OF ANALYSES OF WATER

Maxxam ID		LD2013	LD2020	LD2020		
Sampling Date		2011/09/27	2011/09/27	2011/09/27		
	Units	**ODP-SEPT. 27**	**HARBOUR-SEPT. 27**	**HARBOUR-SEPT. 27 Lab-Dup**	**RDL**	**QC Batch**
Inorganics						
Total Suspended Solids	mg/L	3	2		1	2635856
Turbidity	NTU	2.3	1.5	1.3	0.1	2642768

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		LD2013	LD2013	LD2020		
Sampling Date		2011/09/27	2011/09/27	2011/09/27		
	Units	**ODP-SEPT. 27**	**ODP-SEPT. 27 Lab-Dup**	**HARBOUR-SEPT. 27**	**RDL**	**QC Batch**
PCBs						
Total PCB	ug/L	<0.05	<0.05	<0.05	0.05	2637985
Surrogate Recovery (%)						
Decachlorobiphenyl	%	90	93	110		2637985

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1F3574
Report Date: 2011/10/12

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE GRAB SEDIMENT/FLUX
Your P.O. #: 16300R-40
Sampler Initials: AR

Package 1	15.2°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Samples received at an average temperature of more than 10°C.

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Maxxam Job #: B1F3574
Report Date: 2011/10/12

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE GRAB SEDIMENT/FLUX
Your P.O. #: 16300R-40
Sampler Initials: AR

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2635856	Total Suspended Solids	2011/10/05					<1	mg/L	11.1	25	96	80 - 120
2637985	Decachlorobiphenyl	2011/10/07	32	30 - 130	52	30 - 130	51	%				
2637985	Total PCB	2011/10/07	125	70 - 130	115	70 - 130	<0.05	ug/L	NC	40		
2639036	Decachlorobiphenyl	2011/10/11	84	70 - 130	83	70 - 130	99	%				
2639036	Total PCB	2011/10/11	88	70 - 130	100	70 - 130	<0.01	mg/kg	NC	50		
2642560	Organic Carbon (TOC)	2011/10/11					<0.2	g/kg	2.1	35	98	75 - 125
2642768	Turbidity	2011/10/11					<0.1	NTU	11.3	25	101	80 - 120

N/A = Not Applicable
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Validation Signature Page

Maxxam Job #: B1F3574

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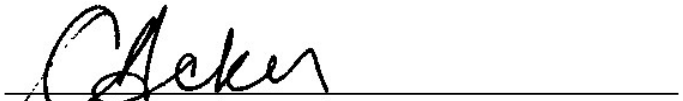
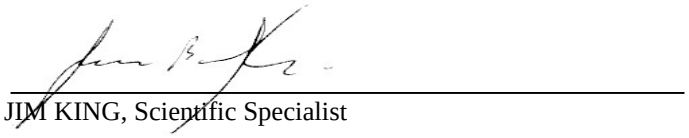
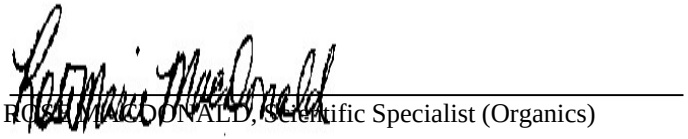


COLLEEN ACKER,



JIM KING, Scientific Specialist



ROBERT MACDONALD, Scientific Specialist (Organics)

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Your P.O. #: 16400NR
Your Project #: 121411777.210
Site Location: HOPEDALE CORE SEDIMENT
Your C.O.C. #: ES404911

Attention: Anna Roy
Stantec Consulting Ltd
607 Torbay Rd
St. John's, NL
A1A 4Y6

Report Date: 2011/11/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1H1559
Received: 2011/11/01, 9:44

Sample Matrix: Soil
Samples Received: 98

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Moisture	66	N/A	2011/11/03	ATL SOP 00001	MOE Handbook 1983
Moisture	32	N/A	2011/11/04	ATL SOP 00001	MOE Handbook 1983
PCB/DDT in Soil by GC-ECD	10	2011/11/03	2011/11/04	ATL SOP 00106	Based EPA8082
PCB/DDT in Soil by GC-ECD	30	2011/11/03	2011/11/07	ATL SOP 00106	Based EPA8082
PCB/DDT in Soil by GC-ECD	58	2011/11/03	2011/11/08	ATL SOP 00106	Based EPA8082

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: MHill@maxxam.ca
Phone# (902) 420-0203

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Total cover pages: 1

Maxxam Job #: B1H1559
Report Date: 2011/11/08

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE CORE SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF SOIL

Maxxam ID		LL9648	LL9670	LL9671	LL9672	LL9673	LL9674	LL9675	LL9676	LL9677	LL9678		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C1-A-01**	**C1-A-02**	**C1-A-03**	**C1-A-04**	**C1-A-05**	**C1-A-06**	**C1-A-07**	**C1-A-08**	**C1-A-09**	**C1-A-10**	**RDL**	**QC Batch**
Inorganics													
Moisture	%	64	66	62	53	53	49	47	45	45	42	1	2669377

Maxxam ID		LL9679	LL9680	LL9681	LL9682	LL9683	LL9684	LL9685	LL9686	LL9687	LL9688		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C1-A-11**	**C1-A-12**	**C2-A-01**	**C2-A-02**	**C2-A-03**	**C2-A-04**	**C2-A-05**	**C2-A-06**	**C2-A-07**	**C2-A-08**	**RDL**	**QC Batch**
Inorganics													
Moisture	%	38	37	49	55	52	51	45	27	41	42	1	2669377

Maxxam ID		LL9689	LL9690	LL9691		LL9692	LL9693	LL9694	LL9695	LL9696	LL9697		
Sampling Date		2011/10/26	2011/10/26	2011/10/26		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C2-A-09**	**C2-A-10**	**C2-A-11**	**QC Batch**	**C2-A-12**	**C2-A-13**	**C2-A-14**	**C2-A-15**	**C2-A-16**	**C2-A-17**	**RDL**	**QC Batch**
Inorganics													
Moisture	%	44	35	38	2669377	35	30	28	28	28	25	1	2669401

Maxxam ID		LL9698	LL9699	LL9700	LL9701	LL9702	LL9703	LL9704	LL9705	LL9706	LL9707		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C2-A-18**	**C2-A-19**	**C2-A-20**	**C2-A-21**	**C2-A-23**	**C3-A-01**	**C3-A-02**	**C3-A-03**	**C3-A-04**	**C3-A-05**	**RDL**	**QC Batch**
Inorganics													
Moisture	%	24	26	25	27	21	49	48	45	43	43	1	2669401

Maxxam ID		LL9708	LL9709	LL9710	LL9711	LL9712	LL9713	LL9714		LL9715	LL9716		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		2011/10/26	2011/10/26		
	Units	**C3-A-06**	**C3-A-07**	**C3-A-08**	**C3-A-09**	**C3-A-10**	**C3-A-11**	**C3-A-12**	**QC Batch**	**C3-A-13**	**C3-A-14**	**RDL**	**QC Batch**
Inorganics													
Moisture	%	38	35	34	29	29	28	25	2669401	24	24	1	2669454

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B1H1559
Report Date: 2011/11/08

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE CORE SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF SOIL

Maxxam ID		LL9717	LL9718	LL9719	LL9720	LL9721	LL9722	LL9723	LL9724	LL9725	LL9726		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C3-A-15**	**C3-A-16**	**C3-A-17**	**C3-A-18**	**C3-A-19**	**C3-A-20**	**C4-A-01**	**C4-A-02**	**C4-A-03**	**C4-A-04**	**RDL**	**QC Batch**
Inorganics													
Moisture	%	23	21	15	20	17	21	49	50	45	45	1	2669454

Maxxam ID		LL9727	LL9728	LL9729	LL9730	LL9731	LL9732	LL9733	LL9734		LL9735		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		2011/10/26		
	Units	**C4-A-05**	**C4-A-06**	**C4-A-07**	**C4-A-08**	**C4-A-09**	**C4-A-10**	**C4-A-11**	**C4-A-12**	**QC Batch**	**C4-A-13**	**RDL**	**QC Batch**
Inorganics													
Moisture	%	42	41	40	38	36	30	28	23	2669454	22	1	2669579

Maxxam ID		LL9736	LL9737	LL9738	LL9739	LL9740	LL9741	LL9742	LL9743	LL9744	LL9745		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C4-A-14**	**C4-A-15**	**C4-A-16**	**C4-A-17**	**C4-A-18**	**C4-A-19**	**C4-A-20**	**C4-A-21**	**C5-A-01**	**C5-A-02**	**RDL**	**QC Batch**
Inorganics													
Moisture	%	23	25	25	22	23	23	23	20	69	54	1	2669579

Maxxam ID		LL9746	LL9747	LL9748	LL9749	LL9750	LL9751	LL9752	LL9753	LL9754	LL9755		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C5-A-03**	**C5-A-04**	**C5-A-05**	**C5-A-06**	**C5-A-07**	**C5-A-08**	**C5-A-09**	**C5-A-10**	**C5-A-11**	**C5-A-12**	**RDL**	**QC Batch**
Inorganics													
Moisture	%	52	54	50	50	50	46	43	41	38	37	1	2669579

Maxxam ID		LL9756	LL9757		LL9758	LL9759	LL9760		
Sampling Date		2011/10/26	2011/10/26		2011/10/26	2011/10/26	2011/10/26		
	Units	**C5-A-13**	**C5-A-14**	**QC Batch**	**C5-A-15**	**C5-A-16**	**C5-A-17**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	28	26	2669579	27	27	24	1	2669688

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1H1559
Report Date: 2011/11/08

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE CORE SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

RESULTS OF ANALYSES OF SOIL

Maxxam ID		LL9761	LL9762	LL9763	LL9764	LL9765	LM0806		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C5-A-18**	**C5-A-19**	**C5-A-20**	**C5-A-21**	**C5-A-22**	**C2-A-22**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	26	25	27	23	21	26	1	2669688

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		LL9648	LL9670	LL9671	LL9672	LL9673	LL9674	LL9675	LL9676	LL9677	LL9678		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C1-A-01**	**C1-A-02**	**C1-A-03**	**C1-A-04**	**C1-A-05**	**C1-A-06**	**C1-A-07**	**C1-A-08**	**C1-A-09**	**C1-A-10**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.92	1.6	1.2	1.2	1.4	1.6	1.5	2.0	3.1	3.3	0.01	2669438
Surrogate Recovery (%)													
Decachlorobiphenyl	%	102(1)	97(1)	103(1)	91(1)	100(1)	101(1)	100(1)	108(1)	100(1)	96(1)		2669438

Maxxam ID		LL9678	LL9679	LL9680	LL9681	LL9682	LL9683	LL9684	LL9685	LL9686	LL9687		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C1-A-10 Lab-Dup**	**C1-A-11**	**C1-A-12**	**C2-A-01**	**C2-A-02**	**C2-A-03**	**C2-A-04**	**C2-A-05**	**C2-A-06**	**C2-A-07**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	2.8	2.8	1.9	0.14	0.21	0.23	0.21	0.17	0.14	0.14	0.01	2669438
Surrogate Recovery (%)													
Decachlorobiphenyl	%	97	98(1)	93(1)	102(1)	108(1)	106(1)	101(1)	99(1)	115(1)	113(1)		2669438

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1260.

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Maxxam Job #: B1H1559
Report Date: 2011/11/08

Stantec Consulting Ltd
Client Project #: 121411777.210
Site Location: HOPEDALE CORE SEDIMENT
Your P.O. #: 16400NR
Sampler Initials: AR

PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		LL9688		LL9689	LL9690	LL9690	LL9691	LL9692	LL9693	LL9694	LL9695		
Sampling Date		2011/10/26		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C2-A-08**	**QC Batch**	**C2-A-09**	**C2-A-10**	**C2-A-10 Lab-Dup**	**C2-A-11**	**C2-A-12**	**C2-A-13**	**C2-A-14**	**C2-A-15**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.11	2669438	<0.01	0.04	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	2669490
Surrogate Recovery (%)													
Decachlorobiphenyl	%	100(1)	2669438	77	109(1)	102	90	98	91	92	89		2669490

Maxxam ID		LL9696	LL9697	LL9698	LL9699	LL9700	LL9701	LL9702	LL9703	LL9704	LL9705		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C2-A-16**	**C2-A-17**	**C2-A-18**	**C2-A-19**	**C2-A-20**	**C2-A-21**	**C2-A-23**	**C3-A-01**	**C3-A-02**	**C3-A-03**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.26	0.28	0.23	0.01	2669490
Surrogate Recovery (%)													
Decachlorobiphenyl	%	87	95	106	94	101	93	98	86(1)	103(1)	93(1)		2669490

Maxxam ID		LL9706	LL9707	LL9708		LL9709	LL9710	LL9711	LL9712	LL9713	LL9714		
Sampling Date		2011/10/26	2011/10/26	2011/10/26		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C3-A-04**	**C3-A-05**	**C3-A-06**	**QC Batch**	**C3-A-07**	**C3-A-08**	**C3-A-09**	**C3-A-10**	**C3-A-11**	**C3-A-12**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	0.22	0.27	0.27	2669490	0.15	0.07	0.10	0.03	<0.01	<0.01	0.01	2669846
Surrogate Recovery (%)													
Decachlorobiphenyl	%	88(1)	98(1)	101(1)	2669490	92(1)	100(1)	101(1)	94(1)	91	99		2669846

Maxxam ID		LL9714	LL9715	LL9716	LL9717	LL9718	LL9719	LL9720	LL9721	LL9722	LL9723		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C3-A-12 Lab-Dup**	**C3-A-13**	**C3-A-14**	**C3-A-15**	**C3-A-16**	**C3-A-17**	**C3-A-18**	**C3-A-19**	**C3-A-20**	**C4-A-01**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.15	0.01	2669846
Surrogate Recovery (%)													
Decachlorobiphenyl	%	96	116	95	98	97	92	91	109	83	93(1)		2669846

RDL = Reportable Detection Limit
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PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		LL9724		LL9725	LL9725		LL9726	LL9727	LL9728	LL9729		
Sampling Date		2011/10/26		2011/10/26	2011/10/26		2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C4-A-02**	**QC Batch**	**C4-A-03**	**C4-A-03 Lab-Dup**	**QC Batch**	**C4-A-04**	**C4-A-05**	**C4-A-06**	**C4-A-07**	**RDL**	**QC Batch**
PCBs												
Total PCB	mg/kg	0.25	2669846	3.6	2.8	2669859	0.35	0.34	0.55	0.45	0.01	2669846
Surrogate Recovery (%)												
Decachlorobiphenyl	%	93(1)	2669846	109(1)	89(1)	2669859	88(1)	82(1)	109(1)	89(1)		2669846

Maxxam ID		LL9730	LL9731	LL9732	LL9733	LL9734	LL9735	LL9736	LL9737	LL9738	LL9739		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C4-A-08**	**C4-A-09**	**C4-A-10**	**C4-A-11**	**C4-A-12**	**C4-A-13**	**C4-A-14**	**C4-A-15**	**C4-A-16**	**C4-A-17**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	4.0	4.4	2.8	2.5	3.0	0.20	0.09	<0.01	<0.01	<0.01	0.01	2669859
Surrogate Recovery (%)													
Decachlorobiphenyl	%	88(1)	105(1)	93(1)	100(1)	99(1)	83(1)	93(1)	90	98	94		2669859

Maxxam ID		LL9740	LL9741	LL9742	LL9743	LL9744	LL9745	LL9746	LL9747	LL9748		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C4-A-18**	**C4-A-19**	**C4-A-20**	**C4-A-21**	**C5-A-01**	**C5-A-02**	**C5-A-03**	**C5-A-04**	**C5-A-05**	**RDL**	**QC Batch**
PCBs												
Total PCB	mg/kg	<0.01	<0.01	<0.01	<0.01	3.0	2.8	2.5	2.7	2.9	0.01	2669859
Surrogate Recovery (%)												
Decachlorobiphenyl	%	96	114	100	96	98(1)	100(1)	85(1)	98(1)	92(1)		2669859

Maxxam ID		LL9749	LL9750	LL9751	LL9752	LL9753	LL9753	LL9754	LL9755	LL9756	LL9757		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C5-A-06**	**C5-A-07**	**C5-A-08**	**C5-A-09**	**C5-A-10**	**C5-A-10 Lab-Dup**	**C5-A-11**	**C5-A-12**	**C5-A-13**	**C5-A-14**	**RDL**	**QC Batch**
PCBs													
Total PCB	mg/kg	3.1	3.5	3.4	3.3	2.7	3.3	3.2	2.8	0.83	0.48	0.01	2670141
Surrogate Recovery (%)													
Decachlorobiphenyl	%	84(1)	89(1)	94(1)	93(1)	94(1)	94(1)	100(1)	100(1)	89(1)	90(1)		2670141

RDL = Reportable Detection Limit
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PCB'S AND DDT BY GC-ECD (SOIL)

Maxxam ID		LL9758	LL9759	LL9760	LL9761	LL9762	LL9763	LL9764	LL9765	LM0806		
Sampling Date		2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26	2011/10/26		
	Units	**C5-A-15**	**C5-A-16**	**C5-A-17**	**C5-A-18**	**C5-A-19**	**C5-A-20**	**C5-A-21**	**C5-A-22**	**C2-A-22**	**RDL**	**QC Batch**
PCBs												
Total PCB	mg/kg	0.42	0.68	0.18	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	2670141
Surrogate Recovery (%)												
Decachlorobiphenyl	%	85(1)	97(1)	108(1)	94(1)	95	88	96	95	92		2670141

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Aroclor 1260.

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Package 1	9.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
2669438	Decachlorobiphenyl	2011/11/04	94	70 - 130	104	70 - 130	111	%		
2669438	Total PCB	2011/11/04	NC	70 - 130	80	70 - 130	<0.01	mg/kg	16.4	50
2669490	Decachlorobiphenyl	2011/11/07	89	70 - 130	86	70 - 130	93	%		
2669490	Total PCB	2011/11/07	84	70 - 130	92	70 - 130	<0.01	mg/kg	NC	50
2669846	Decachlorobiphenyl	2011/11/08	93	70 - 130	103	70 - 130	100	%		
2669846	Total PCB	2011/11/08	88	70 - 130	96	70 - 130	<0.01	mg/kg	NC	50
2669859	Decachlorobiphenyl	2011/11/08	96	70 - 130	100	70 - 130	103	%		
2669859	Total PCB	2011/11/08	NC	70 - 130	96	70 - 130	<0.01	mg/kg	24.1	50
2670141	Decachlorobiphenyl	2011/11/08	88	70 - 130	93	70 - 130	84	%		
2670141	Total PCB	2011/11/08	NC	70 - 130	84	70 - 130	<0.01	mg/kg	20.8	50

N/A = Not Applicable
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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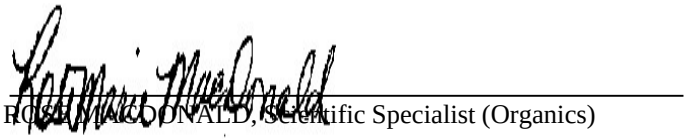
Validation Signature Page

Maxxam Job #: B1H1559

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



ROSA MACDONALD, Scientific Specialist (Organics)

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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