FINAL

DESIGNATED SUBSTANCE AND HAZARDOUS MATERIALS SURVEY REPORT AT FENBROOK INSTITUTION OPERATED BY CORRECTIONAL SERVICE OF CANADA GRAVENHURST, ONTARIO

Prepared for:

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA
Environmental Services – Ontario Region

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EXECUTIVE SUMMARY

Under the Regional Standing Offer (RSO), Public Works Government Services Canada (PWGSC) retained WESA Inc. to conduct a Designated Substance and Hazardous Materials Survey for Fenbrook Institution in Gravenhurst, Ontario. The purpose of this project was to conduct a survey of building construction materials and components, fixtures, and fixed equipment/furniture to determine the presence of designated substances and hazardous materials.

In summary, the following designated substances and hazardous materials were identified in the facility:

- Lead was identified within the wall construction (not exposed) in the x-ray diagnostic room of the health centre;
- Mercury was identified as likely present in the fluorescent bulbs throughout the facility, but not in exposed form;
- Silica was identified as likely present throughout the facility, in cement block, floors and walls, but not in respirable form. Silica may be present in respirable form in the carving shed.
- Ozone Depleting Substance R-22 was identified in three (3) freezers, two (2) walk-in freezers and in four building refrigeration systems;
- Four x-ray units (ionizing / electromagnetic radiation sources) were identified, and corresponding registration/licensing requirements could not be verified (further investigation is required);
- Small quantities of visible mould were identified;
- Fuel/oil and waste oil storage recommendations are identified within the Fenbrook Environmental Conditions and Operations Audit Report, dated February 2011; and
- Chemical storage recommendations are identified within the Fenbrook Environmental Conditions and Operations Audit Report, dated February 2011.

It should be noted that results are only from non-intrusive sampling. For specific projects that involve renovation and/or retrofitting, intrusive sampling of building materials is recommended.

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

Under a Regional Standing Offer, Public Works Government Services Canada (PWGSC) retained WESA Inc. (WESA) to conduct a Designated Substances and Hazardous Materials Survey for the Fenbrook Institution in Gravenhurst, Ontario.

Fenbrook Institution is a medium-security correctional facility, located on Beaver Creek Drive, approximately 7km northeast of Gravenhurst, Ontario, within the District Municipality of Muskoka. The institution is situated on a large reserve property owned by the Government of Canada, shared with Beaver Creek Institution, a minimum security institution. Both facilities are operated by Correctional Services of Canada (CSC).

The survey was performed on February 9th to 11th, 2011.

1.1 OBJECTIVES, SCOPE AND AUDIT CRITERIA

The purpose of this project was to conduct a survey of building construction materials and components, fixtures, and fixed equipment/furniture to determine the presence of the following substances:

- Asbestos-containing materials (ACM)
- Lead based paints, wiring and plumbing (including solder)
- Mercury-containing equipment
- Potential sources of silica
- PCB-containing equipment
- Ozone-depleting substances (as defined in Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems)
- Urea formaldehyde foam insulation (UFFI)
- Fuel, oil and/or waste oil storage
- Chemical storage
- Radioactive materials
- Mould (visible)

The scope of the project included the property, buildings and operations of Fenbrook Institution. The scope also included a review of the building plans and any previous reports.

The scope did not include any operations, property or buildings at Beaver Creek Institution.

The findings of the survey are presented on a room by room basis. If no evidence of the designated substance or hazardous material was found, this information is presented in the report.

1.2 METHODOLOGY

The Fenbrook Institution is regulated by the Canada Labour Code (CLC), Part II and the associated Canadian Occupational Safety and Health Regulations. The CLC, Part II, Section X Hazardous Substances stipulates that reports and assessments of hazardous materials and conditions must be available in workplaces.

The Designated Substances and Hazardous Materials Survey (DSHMS) addressed typical requirements for Health and Safety purposes in accordance with applicable regulations and/or guidelines in Ontario, including O.Reg. 490/09 (Designated Substances Regulation, effective July 1, 2010, which replaces specific DSR regulations) and O.Reg. 278/05 (Regulation respecting Asbestos on Construction Projects and in Buildings and Repair Operations). WESA assessed and/or collected sufficient samples to competently assess the lead content of paint, wiring and plumbing; presence and type of asbestos-containing materials, mercury-containing equipment and potential sources of silica. In addition, the following hazardous materials were included in the survey: PCB-containing material, ozone-depleting substances, UFFI, fuel, oil and/or waste oil storage; chemical storage; radioactive materials; and the presence of mould/fungal spores and present the findings at locations noted on the drawing provided by PWGSC.

A brief opening meeting was held to introduce all parties (PWGSC, CSC and the WESA team), and review the audit plan. The WESA team worked on-site from February 9th through 11th to observe facilities and operations conduct interviews and review documentation. Evidence was collected to investigate the presence/absence of designated substances and make recommendations. A comprehensive closing meeting was held on February 11 with all parties, to review findings.

The WESA team used field books, cameras and electronic checklists to record observations and evidence. Relevant photos are included in Appendix B of this report.

1.3 SAMPLING

In order to minimize disruption to operations and inmates, to maintain a reasonable budget, and to conform to time restraints, the survey is based upon a sampling of building systems, operations and documents. All buildings were entered and reviewed, including basements, mezzanines, equipment rooms, closets, and roof areas where practicable. Not every single operation, system, process, or site relating to hazardous materials can be reviewed in detail. The size of the sample selected by WESA is appropriate to the size and scale of the operation and information available. Objective evidence collected by WESA is based upon the sampling.

Refrigeration equipment, light ballasts (PCB potential) and thermostat/switches (mercury potential) were sampled and inspected. Bulk materials samples were taken in areas where designated substances were potentially present, based on age of building, construction materials and observation. All samples were taken to be representative but not destructively intrusive. Representative light ballasts from each main building were inspected.

One residence was visited within Buildings E, F, G and H, as a representative unit for all residences. CSC indicated that all residences were similar, with minor differences in bedroom configurations, and building H was constructed with cement block, rather than 2x4 framing.

1.4 LIMITING CONDITIONS

The conclusions presented in this report represent the professional opinion of the WESA team, in light of the terms of reference, scope of work, and any limiting conditions noted herein. It is not intended to be a definitive investigation of contamination, at the properties included within the scope of the DSHMS.

Furthermore, the conclusions presented are based on information obtained up to and including March 25, 2011. Site operations or land uses that may have changed since that time may alter the conclusions or render them invalid.

It should be noted that roof access to all buildings was severely limited, due to accumulation of snow and weather conditions.

1.5 REPORT FORMAT

Section 2.1 summarizes the site and building functions.

Section 2.2 presents a table-format, room by room summary of the findings from the Designated Substances and Hazardous Materials Survey, categorized by substance.

In Section 2.3, recommendations for the disturbance, handling and disposal of each substance identified, with particular emphasis placed on construction and renovation work, are provided. Any mitigation measures required to bring the substances present into compliance with applicable federal and provincial legislation are clearly identified, including the suggested mitigation methods and associated costs.

Section 3.0 summarizes all of the findings.

The Appendices include all other relevant information, including the photographs, site plan, and drawings.

2.0 DESIGNATED SUBSTANCE AND HAZARDOUS MATERIALS SURVEY

This section describes the findings from the designated substance and hazardous materials survey.

2.1 SITE BUILDING AND DESCRIPTION

Fenbrook Institution is a medium-security correctional facility operated by CSC, located within the District Municipality of Muskoka. The institution is situated on a large reserve property owned by the Government of Canada, shared with Beaver Creek Institution, a minimum security institution (out of scope). No public roads are crossed in transfer of materials between the two facilities.

The site consists of a collection of buildings with various functions, encircling a main common grass area. Individual departments have assigned responsibilities relating to various aspects of environmental management, while the Environment and Safety Officer has the general responsibility of overall environment and safety initiatives.

- Driftwood (Industries Building): Main receiving and storage facility, primary offices for the Works Department, Institutional Services, Food Services and CORCAN. Some small quantities of hazardous materials and wastes.
- Nova (Cogen/Boiler Plant): Provides heating for the institution using boilers, backup electricity for the institution using generators. Some larger quantities of hazardous material and waste storage inside, in external hut, and in external large diesel storage tanks. New generator and diesel storage tank being installed outdoors. Currently includes a large outdoor temporary trailer housing a rental backup generator.
- Poplar (Garage): Stores small vehicles used inside the security fencing (lawn mowers, tractor).
- Quartz (Sewage Lift Station): Sewage pump station, transferring collective sewage from Fenbrook and Beaver Creek facilities to the municipal sanitary sewer system. No hazardous waste storage.
- Cedar (Health Care/Segregation): A building shared between Health Care and Segregation. Houses several examination rooms, dental care rooms, and offices. Currently reorganizing exam rooms and offices. Dental amalgam waste though filtration treatment to sewer. Biomedical waste temporarily stored, then removed to Beaver Creek. One ionizing radiation device used for medical purposes (X-ray).
- Aurora (Gate House / Admissions): Serves as main access point to the institution, with entry screening for all visitors, staff and goods (most shipments are received through the

Beaver Creek facility). Munitions and related materials are stored in a small armoury room. Admissions and Discharge area. Several ionizing radiation devices used for security purposes.

- Edgewood, Falcon, Granite and Horizon (Residences): Serve as main residences for inmates. No hazardous waste storage.
- Borealis (Visits and Correspondence): Main building for visitations between inmates and visitors.
- Meadow and Spruce (Private Family Visits): Detached apartments for private family visits.
- Lighthouse (Chapel): Includes chapel and offices.
- Katimavik (Administration): Includes administration offices.
- Juniper (Programs / Gym / School): Includes classrooms and rooms dedicated to recreational programs.

2.2 DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS

Screening observations related to the following designated substances and hazardous materials are presented below:

- asbestos-containing materials;
- lead based paints, wiring, and plumbing (including solder);
- mercury-containing equipment;
- potential sources of silica;
- PCB-containing equipment (specify model, serial #, and date stamp info.);
- ozone-depleting substances (specify model, serial #, and name plate info.);
- urea formaldehyde foam insulation (UFFI);
- fuel, oil and/or waste oil storage;
- chemical storage;
- radioactive materials; and
- mould (visible).

Recommendations for the disturbance, handling and disposal of each substance are identified, with particular emphasis placed on construction and renovation work.

Recommended mitigation measures in order to bring the substance into compliance with applicable federal and provincial legislation are included, where applicable.

Further details, photographs and costs to address non-compliances, where applicable, are provided in Section 2.3.

2.2.1 Asbestos- Containing Materials

Due to the age of the buildings (constructed in 1997), no asbestos was suspected or observed in the facility. No suspected ACM material was observed in any buildings in the institution, including floor tiles and insulation. As a result, no samples were collected.

2.2.2 Lead Based Paints, Wiring and Plumbing

Confirmed Present?	Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Action
No	Quartz – P1, concrete floor	Grey Paint, peeling away from base. Accessible.	Paracel Laboratories results < 50 ug/g lead (below the lab detection limit)	Paint chipped	No evidence of non-compliance. No action required.
No	Quartz – P2 metal door frame	Grey Paint, peeling away from base. Accessible.	Paracel Laboratories results < 50 ug/g lead (below the lab detection limit)	Paint Peeling	No evidence of non-compliance. No action required.
No	Borealis – P3 Wall	Yellow Wall Paint, peeling on ceiling/wall. Accessible.	Paracel Laboratories results < 50 ug/g lead (below the lab detection limit)	Paint Peeling	No evidence of non-compliance. No action required.
No	Borealis – P4 Wall	White Wall Paint, peeling on ceiling/wall. Accessible.	Paracel Laboratories results < 50 ug/g lead (below the lab detection limit)	Paint Peeling	No evidence of non-compliance. No action required.
No	Driftwood – P5 metal door	Grey Paint, peeling away from base. Accessible.	Paracel Laboratories results < 50 ug/g lead (below the equipment detection limit)	Paint Peeling	No evidence of non-compliance. No action required.
Yes	Cedar – X-ray diagnostic room	Walls around x-ray room constructed with lead (may be lead panels, sheet, lead-lined drywall or lead-lined plywood). Not accessible unless room/walls are under construction (located within wall construction).	No testing was performed.	No concerns with construction or condition.	No evidence of non-compliance. Any worker or contractor who performs work that would disturb the lead in the wall construction should be informed of the presence of lead.

2.2.3 Mercury- Containing Equipment

Confirmed Present?	Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Action
Yes	Throughout the facility, as shown in electrical drawings for all buildings (all fluorescent tubes contain mercury).	Fluorescent Light Tubes. Accessible if glass housing is compromised causing sealed chamber containing mercury gas to be released.	Coarse estimate of 7,500 bulbs at site, based on 500 bulbs x 15 large buildings	In good operating condition, all functioning. Waste tubes being collected for recycling. Ensure correct documentation is continued to be prepared to meet regulatory requirements for shipping.	No evidence of non-compliance. No action required.
No	Thermostats located throughout the facility, but mercury not observed in any units.	Installed analog thermostats may contain mercury, but for those sampled, a mercury temperature sensor was not observed. Electrician interviewed stated that only non-mercury thermostats are installed.	None viewed	Not applicable	No evidence of non-compliance. Care must be taken when handling or removing thermostats that may contain mercury, to ensure mercury bulb inside unit is not compromised. Mercury-containing units cannot be disposed of in garbage, but should be collected by licensed hauler and disposed of as per regulatory requirements.

2.2.4 Potential Sources of Silica

Confirmed Present?	Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Action
Likely	Throughout the Facility	Cement block, floor construction throughout. Full accessibility, but not in airborne form.	-	No breakdown of block observed in lower building foundations and basements. Respirable form not suspected.	No evidence of non-compliance. No action required.
Likely	Carving Shed (R building)	Silica dust may be released when soapstone carving is performed. Dust masks are currently used by carvers.	Not available	Building could not be accessed, to confirm presence of dust, or to observe carving activities. No activity occurring.	No evidence of non-compliance.

2.2.5 PCB- Containing Equipment

No PCB containing light ballasts were identified during the survey. The following types/brands of light ballasts were identified during sampling:

- Advance – standard
- Symban
- Philips
- Motorola

None of these brands of ballasts contain PCBs, as confirmed through investigation of serial numbers using the federal resource document "Identification of Lamp Ballasts Containing PCBs"[1]. As a result, no evidence of non-compliance was observed, and no action is required.

[1] Environment Canada. Identification of Lamp Ballasts Containing PCBs: 2-CC-2-E. Canada, 1991.

2.2.6 Ozone-Depleting Substances

Confirmed Present?	Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Action
Yes	Aurora	Chiller charged with R-22. Accessible only if unit is compromised.	Cooling capacity not available.	Appears to be in good operating condition, no reported leaks, live monitoring from Nova Building. All maintained by licensed refrigerant contractors. Frequency of leak tests for equipment in Granite and Horizon Buildings has exceeded 12 months in the past, and may have occurred for this equipment (records not viewed). Recorded log information for the chiller in the Horizon building was incomplete, and the log for this unit may also be incomplete (records not viewed).	The facility should ensure the contractor completes leak testing of units containing R-134A within 12 months, and that a record/service log be maintained whenever the system is serviced, leak-tested or charged (see See Environmental Conditions and Operations Audit Report section 2.2.4). Plan/budget for future replacement, as R-22 will be banned for use in 2015.
No	Cedar	"R-12, R-22 R502" on rooftop nameplates, however actual refrigerant housed in chiller unit in building is R134a, according to staff.	"R-12, R-22 R502" on rooftop nameplates, however actual refrigerant housed in chiller unit in building, according to staff, is R134a (not an ozone-	Appears to be in good operating condition, no reported leaks, live monitoring from Nova Building. All maintained by licensed refrigerant contractors. Frequency of leak tests for equipment in Granite and Horizon Buildings has exceeded 12 months in the past, and may have occurred for this equipment (records not viewed). Recorded log information for the chiller in the	The facility should ensure the contractor completes leak testing of units containing R-134A within 12 months, and that a record/service log be maintained whenever the system is serviced, leak-tested or charged (see See Environmental Conditions and Operations Audit Report section 2.2.4).

Confirmed Present?	Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Action
			depleting substance)[2]. Cooling capacity not available.	Horizon building was incomplete, and the log for this unit may also be incomplete (records not viewed).	Ensure HVAC contractor updates labelling on rooftop condensers promptly, to reflect actual refrigerant, as R-22 will be banned for use in 2015
Yes	Spruce, Lighthouse	Chiller/compressor in mechanical room, charged with R-22. Accessible only if unit is compromised.	Cooling capacity not available.	Appears to be in good operating condition, no reported leaks, live monitoring from Nova. All maintained by licensed refrigerant contractors. Frequency of leak tests for equipment in Granite and Horizon Buildings has exceeded 12 months in the past, and may have occurred for this equipment (records not viewed). Recorded log information for the chiller in the Horizon building was incomplete, and the log for these units may also be incomplete (records not viewed).	The facility should ensure the contractor completes leak testing of units containing R-134A within 12 months, and that a record/service log be maintained whenever the system is serviced, leak-tested or charged (see See Environmental Conditions and Operations Audit Report section 2.2.4). Plan/budget for future replacement, as R-22 will be banned for use in 2015.

[2] Environment Canada. "Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems". March 1996.

Confirmed Present?	Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Action
Yes	Meadow	Window air conditioners contain R-22.	Cooling capacity not available.	Units not observed. All maintained by licensed refrigerant contractors. Frequency of leak tests for equipment in Granite and Horizon Buildings has exceeded 12 months in the past, and may have occurred for this equipment (records not viewed). Recorded log information for the chiller in the Horizon building was incomplete, and the log for these units may also be incomplete (records not viewed).	The facility should ensure the contractor completes leak testing of units containing R-134A within 12 months, and that a record/service log be maintained whenever the system is serviced, leak-tested or charged (see See Environmental Conditions and Operations Audit Report section 2.2.4). Plan/budget for future replacement, as R-22 will be banned for use in 2015.
Yes	Driftwood D124	3 Freezers charged with R-22. Accessible only if unit is compromised.	Cooling capacity not available.	Appears to be in good operating condition, no reported leaks. All maintained by licensed refrigerant contractors, when required. Frequency of leak tests for equipment in Granite and Horizon Buildings has exceeded 12 months in the past, and may have occurred for this equipment (records not viewed). Recorded log information for the chiller in the Horizon building was incomplete, and the log for these units may also be incomplete (records not viewed).	The facility should ensure the contractor completes leak testing within 12 months (see See Environmental Conditions and Operations Audit Report section 2.2.4). Plan/budget for future replacement, as R-22 will be banned for use in 2015.

Confirmed Present?	Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Action
Yes	Driftwood D116	1 walk-in freezer charged with R-22. Accessible only if unit is compromised.	Cooling capacity not available.	Appears to be in good operating condition, no reported leaks. All maintained by licensed refrigerant contractors, when required. Frequency of leak tests for equipment in Granite and Horizon Buildings has exceeded 12 months in the past, and may have occurred for this equipment (records not viewed). Recorded log information for the chiller in the Horizon building was incomplete, and the log for this unit may also be incomplete (records not viewed).	The facility should ensure the contractor completes leak testing of units containing R-134A within 12 months, and that a record/service log be maintained whenever the system is serviced, leak-tested or charged (see See Environmental Conditions and Operations Audit Report section 2.2.4). Plan/budget for future replacement, as R-22 will be banned for use in 2015.
Yes	Driftwood D117	1 walk-in freezer charged with R-22. Accessible only if unit is compromised.	Cooling capacity not available.	Appears to be in good operating condition, no reported leaks. Frequency of leak tests for equipment in Granite and Horizon Buildings has exceeded 12 months in the past, and may have occurred for this equipment (records not viewed). Recorded log information for the chiller in the Horizon building was incomplete, and the log for this unit may also be incomplete (records not viewed).	The facility should ensure the contractor completes leak testing of units containing R-134A within 12 months, and that a record/service log be maintained whenever the system is serviced, leak-tested or charged (see See Environmental Conditions and Operations Audit Report section 2.2.4). Environmental Plan/budget for future replacement, as R-22 will be banned for use in 2015.

2.2.7 Urea Formaldehyde Foam Insulation

Urea formaldehyde foam insulation was not suspected or observed in any buildings in the institution, due to the age of the facility (1997). As a result, no samples were collected, no evidence of non-compliance was observed, and no action is recommended.

2.2.8 Fuel, Oil and/or Waste Oil Storage

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Compliance Action
NOVA, N103 North Wall	Diesel 'Day Tank". Sealed and closed, accessible only if tank or piping is compromised.	910 L	Concrete Secondary containment.	See Environmental Conditions and Operations Audit Report Recommendations: 1-b
NOVA, N104 West Wall	Lube Oil Storage. Sealed and closed, accessible only if tank or piping is compromised.	Approx. 250L	No containment, no viewed leaks or spills.	See Environmental Conditions and Operations Audit Report
NOVA, N104 West Wall	Mysella LA30 407173 Natural Gas engine oil. Accessible container	208L	No containment, no viewed leaks or spills.	None
POPLAR P107 Flammable Storage Cabinet	Chain Oil Accessible container	1 X 4L	No containment, no viewed leaks or spills.	None
POPLAR P107 Flammable Storage Cabinet	Mixed Gasoline Accessible container	2 X 5L	Within cabinet, no viewed leaks or spills.	See Environmental Conditions and Operations Audit Report Recommendations: 1-b
POPLAR P107 Flammable Storage Cabinet	Gasoline Accessible container	3 X 5 gallons	Within cabinet, no viewed leaks or spills.	See Environmental Conditions and Operations Audit Report Recommendations: 1-b
POPLAR P107 Flammable Storage Cabinet	Diesel Accessible container	1 X 5 gallons	Within cabinet, no viewed leaks or spills.	See Environmental Conditions and Operations Audit Report Recommendations: 1-b

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Compliance Action
NOVA outdoors	Diesel Sealed and closed, gated area, accessible only if tanks are comprimised.	2 x 4077 L	Double-walled tanks and piping, secured area.	See Environmental Conditions and Operations Audit Report Recommendations: 1-b, 2-a, 2-b

2.2.9 Chemical Storage

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Compliance Action
NOVA, N104 West Wall	CSW 311 recirculatory water treatment additive Accessible container	3 X 24.97 kg	Located on secondary containment tray.	None
NOVA, N104 South Wall	Corrshield OR4404 Accessible container	228.27kg	No viewed leaks or spills.	None
NOVA N101 South Wall	CSW 311 recirculatory water treatment additive Accessible container	24.97 kg	Container sitting on floor, no containment.	None
CEDAR C125	All purpose cleaner Accessible container	5L	No viewed leaks or spills.	None
CEDAR C125	Glass Cleaner Accessible container	1L	No viewed leaks or spills.	None
CEDAR Mechanical Room	CSW 311 recirculatory water treatment additive Accessible container	24.97 kg	Container sitting on floor, no containment.	None
CEDAR Examination Room	Compressed oxygen cylinder	Unknown	Container sitting on floor, no security strap or chain.	See Environmental Conditions and Operations Audit Report Recommendations: 4-a
DRIFTWOOD D179	Neutral Disinfectant Accessible container	10 X 4.73 L	No containment, no evidence of leaks or spills observed.	None
DRIFTWOOD D179	Sparkle Glass Cleaner Accessible container	5 X 3.78 L	No containment, no evidence of leaks or spills observed.	None
DRIFTWOOD D179	Kleen and Shine multi-surface cleaner Accessible container	16 X 946 mL	No containment, no evidence of leaks or spills observed.	None

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Compliance Action
DRIFTWOOD D173, flammable cabinet	Vinyl Cement Accessible container	3 X 18.9 L	flammable material, dispensing into smaller containers, consistency of molasses. No spill kit, no grounding for dispensing.	See Environmental Conditions and Operations Audit Report Recommendations: 1-b, 7-a
DRIFTWOOD D145, flammable cabinet	Epoxy Glue Accessible container	5 X 946 mL	Within cabinet, no viewed leaks or spills.	None
DRIFTWOOD D145, flammable cabinet	Goo Gone Accessible container	10 X 946 mL	Within cabinet, no viewed leaks or spills.	None
DRIFTWOOD D145, flammable cabinet	Brake Clean and WD-40 Accessible container	15 X 5.5oz	Within cabinet, no evidence of leaks or spills observed.	None
DRIFTWOOD D138, flammable cabinet	Minwax Accessible container	4 X 946 mL	Locked cabinet, within cabinet, no evidence of leaks or spills observed.	None
DRIFTWOOD D138, flammable cabinet	Contact Cement Accessible container	2 X 3.8L	Locked cabinet, within cabinet, no evidence of leaks or spills observed.	None
DRIFTWOOD D138, flammable cabinet	Deep Woods Off Accessible container	16 X 100 mL	Locked cabinet, within cabinet, no evidence of leaks or spills observed.	None
DRIFTWOOD D144, flammable cabinet	Varsol Accessible container with lid.	Unknown	No evidence of leaks or spills observed, parts washer has a lid, but is located beside a sink. No label on the parts washer identifying the chemical. No Spill kit.	See Environmental Conditions and Operations Audit Report Recommendations: 1-b
DRIFTWOOD D144, flammable cabinet	Free flow Drain cleaner Accessible container	10 X 32 oz	Locked cabinet, within cabinet, no evidence of leaks or spills observed.	None
DRIFTWOOD D144, flammable cabinet	Calcium, Lime, Rust Remover Accessible container	1 L	Locked cabinet, within cabinet, no evidence of leaks or spills observed.	None
DRIFTWOOD D144, flammable cabinet	Mineral Oil Accessible container	4 X 500mL	Locked cabinet, within cabinet, no evidence of leaks or spills observed.	None

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Compliance Action
DRIFTWOOD D144, flammable cabinet	Acetylene Accessible container	2 cylinders	Oxygen and Acetylene were stored side by side in same cabinet.	See Environmental Conditions and Operations Audit Report Recommendations: 4-b
DRIFTWOOD D144, flammable cabinet	Oxygen Accessible container	2 cylinders	Oxygen and Acetylene were stored side by side in same cabinet.	See Environmental Conditions and Operations Audit Report Recommendations: 4-b
DRIFTWOOD D144, flammable cabinet	Drain Opener Accessible container	7 X 1L	Locked Cabinet within cabinet, no evidence of leaks or spills observed.	None
DRIFTWOOD D144, flammable cabinet	Motomaster Hand Cleaner Accessible container	3 X 3.78 L	Locked Cabinet within cabinet, no evidence of leaks or spills observed.	None
DRIFTWOOD D144, flammable cabinet	Glass Cleaner Accessible container	1 X 1L	Locked Cabinet within cabinet, no evidence of leaks or spills observed.	None
DRIFTWOOD D146	Minwax Wood Refinisher Accessible container	11 X 3.78L	Flammable products stored on open shelf, consumer product, labelled	None
DRIFTWOOD D146	Paint - Various, water based Accessible containers	12 X 3.78L	Consumer product, labelled	None
DRIFTWOOD D146	Hand Cleaner Accessible container	3.78L	Consumer product, labelled	None
DRIFTWOOD D146	Varsol Accessible container	12 X 3.78L	Consumer product, labelled, no evidence of leaks or spills observed	See Environmental Conditions and Operations Audit Report Recommendations: 1-b
DRIFTWOOD D146	Vinegar Accessible container	3.78 L	Not labelled, no evidence of leaks or spills observed	See Environmental Conditions and Operations Audit Report Recommendations: 3-c
DRIFTWOOD D146	Paint Remover Accessible container	3 X 500mL	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D146	Carpenter's Glue Accessible container	2 X 400 mL	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D148A Janitor's Closet	Swish Green and Clean Floor Finish Accessible container	3.78L	Consumer product, labelled, no evidence of leaks or spills observed	None

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Compliance Action
DRIFTWOOD D148A Washroom	Gold Medal Acrylic Floor Finish Accessible container	3.78 L	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD Mezzanine	Paint – PARA, water based Accessible container	20 X 18.6L	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD Mezzanine	Behr premium plus paint Accessible container	26 X 3.55L	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD Mezzanine	Siding Paint, flammable Accessible container	10 X 3.55 L	Consumer product, labelled, no evidence of leaks or spills observed	See Environmental Conditions and Operations Audit Report Recommendations: 1-b
DRIFTWOOD Mezzanine	GCG Joint Compound Accessible container	4 X 6 kg	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D137 Locked Cabinet	Swish 12 % Chlorine Minimum access, as cabinet is locked	9 X 12 L	Stored on a containment tray access to area was blocked with skids no spill kit	None
DRIFTWOOD D170	Paint Accessible container	14 X 9.46 L	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D170	Minwax Accessible container	9.46 L	Flammable, consumer label	See Environmental Conditions and Operations Audit Report Recommendations: 1-b
DRIFTWOOD D177 Locked Cabinet	Prof. Sunsreen Minimum access, as cabinet is locked	4 X 1.5L	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D177 Locked Cabinet	Anti microbial cleaner Minimum access, as cabinet is locked	3 X 4L	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D177 Locked Cabinet	Odour Neutralizer Eco-PR1 Minimum access, as cabinet is locked	4L	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D177 Locked Cabinet	Peroxide Spray Accessible container Minimum access, as cabinet is locked	2 X 4L	Consumer product, labelled, no evidence of leaks or spills observed	None

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Compliance Action
DRIFTWOOD D177 Locked Cabinet	Hand Sanitizer Minimum access, as cabinet is locked	9 X 550 mL	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D177 Flammable Cabinet	URM -D Hand Sanitizer Accessible container	45 X 1L	Spill kit located beside flammable storage cabinet, but blocked with other boxes	None
DRIFTWOOD D177 Flammable Cabinet	Tremclad Accessible container	4 X 340 mL	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D177 Flammable Cabinet	BM 640 ethanol Accessible container	4 L	Consumer product, labelled, no evidence of leaks or spills observed	See Environmental Conditions and Operations Audit Report Recommendations: 1-b
DRIFTWOOD D177 Floor	All purpose cleaner Accessible container	50 X 4L	Stored on floor, no containment, spill kit difficult to access no WHMIS labels	See Environmental Conditions and Operations Audit Report Recommendations: 3-c
DRIFTWOOD D177 Floor	Essential liquid dishwashing detergent Accessible container	205 L	Not on containment tray, has a catch basin for drips, no floor drains located nearby	None
DRIFTWOOD D153A Floor	Green Clean floor finish Accessible container	60 X 3.78 L	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D153A Floor	Old Dutch Cleaner Accessible container	156 X 400g	Consumer product, labelled, no evidence of leaks or spills observed	None
DRIFTWOOD D123 Sink	Dish washing soap Accessible container	2L	Located near floor drain no spill kit	None
DRIFTWOOD D123 Sink	Bleach Accessible container	4 X 2 L	Located near floor drain no spill kit	None
DRIFTWOOD D127	Dish washing soap Accessible container	6L	No evidence of leaks or spills observed	None
POPLAR P107 Flammable Cabinet	Supergrip Epoxy enamel medium base Accessible container	8 X 3.67 L	Within cabinet, no evidence of leaks or spills observed	None
POPLAR P107 Flammable Cabinet	Rustcoat paints (various brands) Accessible container	15 -20 3.67L	Within cabinet, no evidence of leaks or spills observed	None

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Compliance Action
POPLAR P107 Flammable Cabinet	"Sludge pail" 1/3 full Accessible container	5 gallon pail	Within cabinet, no evidence of leaks or spills observed	None
POPLAR P107 Flammable Cabinet	Varsol Accessible container	4L	Container open to air) Contains paint brushes	None
POPLAR P101 Under Storage Platform	Deicing Salt Accessible container	Skid	No concerns found with storage condition	None
POPLAR P101 Under Storage Platform	Absorbant Accessible container	Skid	No concerns found with storage condition	None
LIGHTHOUSE Janitor`s Closet	All purpose cleaner Accessible container	1 L	No MSDS' located in the closet, WHMIS labels present.	See Environmental Conditions and Operations Audit Report Recommendations: 3-b
LIGHTHOUSE Janitor`s Closet	Glass Cleaner Accessible container	1 L	No MSDS' located in the closet, WHMIS labels present.	See Environmental Conditions and Operations Audit Report Recommendations: 3-b
LIGHTHOUSE Janitor`s Closet	Floor Finish Accessible container	2 X 4 L	No MSDS' located in the closet, WHMIS labels present.	See Environmental Conditions and Operations Audit Report Recommendations: 3-b
KATIMAVICK K120	All purpose cleaner Accessible container	2 X 4 L	No containment, stored on floor No MSDS, No WHMIS label	See Environmental Conditions and Operations Audit Report Recommendations: 3-c
JUNIPER Hobbycraft Flammable Cabinet	Wood finishes Accessible container	30 X 900 mL	Cabinet is vented WHMIS labelled	None
JUNIPER Hobbycraft Flammable Cabinet	Epoxy Stains Accessible container	2 X 500 mL	Cabinet is vented WHMIS labelled	None
JUNIPER Hobbycraft Flammable Cabinet	Maintenance Cleaners Accessible container	6 X 3.6 L	Cabinet is vented WHMIS labelled	None
JUNIPER Hobbycraft Flammable Cabinet	Acetone Accessible container	1 L	Cabinet is vented WHMIS labelled	None
JUNIPER Hobbycraft Flammable Cabinet	Propane cylinders Accessible if propane valve is opened	2	Cabinet is vented WHMIS labelled	None
JUNIPER Hobbycraft Under Sink	Crystal Clear Accessible container	4 L	WHMIS labelled	None

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Compliance Action
JUNIPER Hobbycraft Under Sink	Swish Dish Soap Accessible container	1L	WHMIS labelled	None
BOREALIS B118 Janitor`s Closet	All purpose cleaner Accessible container	2 X 4 L	No WHMIS label	See Environmental Conditions and Operations Audit Report Recommendations: 3-c
BOREALIS B118 Janitor`s Closet	Container with cleaner Accessible container	Unknown	No WHMIS label	See Environmental Conditions and Operations Audit Report Recommendations: 3-c
Spruce Private Family Visit Units Room 5 under sink	All purpose cleaner Accessible container	1 X 4 L	No WHMIS label	See Environmental Conditions and Operations Audit Report Recommendations: 3-c
Spruce Private Family Visit Units Room 5 under sink	Old Dutch Accessible container	500 g	Consumer product label	None
Spruce Private Family Visit Units Room 5 under sink	Dish Detergent Accessible container	750mL	Consumer product label	None
Spruce Private Family Visit Units M116, Bottom of Stairs	Compressor lubricant Accessible container	3.78L	Consumer product label	None
AURORA A214	All purpose cleaner Accessible container	2 X 4L	No WHMIS label	See Environmental Conditions and Operations Audit Report Recommendations: 3-c
AURORA A214	Swish sunbeam floor cleaner Accessible container	4 L	Consumer product label	None
AURORA A214	Old Dutch Accessible container	2 X 500 g	Consumer product label	None
AURORA A214	Dishwashing soap Accessible container	1L	Consumer product label	None
AURORA Storage closet	Compressed CO2 gas cylinders in storage, not in use	Unknown	Compressed gases on floor, not secured with strap or chain	See Environmental Conditions and Operations Audit Report Recommendations: 4-a

2.2.10 Radioactive Materials

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Action
AURORA A117	Baggage X-ray Machine - Source is not accessible as it is housed in unit, but may be some degree of electromagnetic radiation.	Source of electromagnetic radiation (x-ray)	Periodically tested by ADGA, a private consultant contracted to maintain security equipment, as per PM Routine #520, sampled test results sampled show equipment operating in manner acceptable to ADGA.	Access and documentation concerning the radiation sources (ionizing and/or electromagnetic) was limited, as such the following recommendations are made: The Baggage X-Ray equipment may need to be registered with the Ontario Ministry of Labour as per O. Reg. 861 Regulation respecting X-Ray Safety. Baggage X-Ray equipment is exempt under the Canadian Nuclear Safety Commission. Insufficient information was available concerning the Ionization Unit source. CNSC and provincial regulations may apply. The Diagnostic X-Ray equipment may require registration as per the Healing Arts Radiation Protection Act.
AURORA A117	Ionization Unit (for investigating presence of illicit drugs) - Source is not accessible as it is housed in unit, but may be some degree of ionizing radiation.	Source of ionizing radiation	Periodically tested by ADGA, a private consultant contracted to maintain security equipment, as per PM Routine #520. Sampled test results sampled show equipment operating in manner acceptable to ADGA.	
AURORA A110	Baggage X-ray Machine - Source is not accessible as it is housed in unit, but may be some degree of electromagnetic radiation.	Source of electromagnetic radiation (x-ray)	Periodically tested by ADGA, a private consultant contracted to maintain security equipment, as per PM Routine #520, sampled test results sampled show equipment operating in manner acceptable to ADGA.	
CEDAR	Diagnostic X-ray Unit	Source of ionizing radiation (x-ray)	Periodically tested by BCL X-ray Canada, test results sampled show equipment operating acceptable to test criteria.	

2.2.11 Mould

Location	Qualitative Description / Accessibility	Quantitative Description	Condition	Action
EDGEWOOD, FALCON, GRANITE and HORIZON RESIDENCES	Some black mould observed in shower. Some peeling of floor tile from water seepage. Accessible.	Not evaluated	Mould program in place to address mould concerns.	None – mould program already initiated to repair and replace affected areas, and address root cause, according to staff.
AURORA Mechanical Room	Mould growth on some pipe insulation. Possibly caused by water leak/damage or condensation. Accessible to maintenance personnel.	Approximately 1.0 m2 in total	Visible mould growth	Mould remediation should be carried out using the Canadian Constuction Association "*Guidelines for Mould Remediation for the Canadian Construction Industry*" (doc 82-2004) under Small-Scale Mould Growth (Less than 1 m²).
BOREALIS B118	Mould growth in Janitor's closet. Possibly caused by pipe break/water damage or condensation. Accessible to those with access to janitor's closet.	Approximately 0.25 m2 in total	Visible mould growth	
DRIFTWOOD Mechanical Room	Mould growth on some pipe insulation. Possibly caused by water leak/damage or condensation. Accessible to maintenance personnel.	Approximately 1.0 m2 in total	Visible mould growth	

2.3 ESTIMATED COSTS

For each confirmed presence of designated substances or other concern areas from section 2.2, disturbance, handling and disposal recommendations, with particular emphasis placed on construction and renovation work, are provided below. Any mitigation measures required to bring the substances present into compliance with applicable federal and provincial legislation are identified, including the suggested mitigation methods and associated costs.

Lead: (from 2.2.2)	
Cedar Building – Xray room walls	(File photo only showing lead lined drywall) 
Detailed recommendations (from Section 2.2) and Cost Estimate for Compliance: Any worker or contractor who performs work that would disturb the lead in the walls (may be in the form of sheet, drywall-lining, plywood-lining, etc.) should be informed of the presence of lead. As necessary, precautionary measures should be taken and personal protective equipment should be worn when handling the materials confirmed to contain lead at exposure levels exceeding 600 μg/g (as per the Canada Hazardous Products Act). The Ministry of Labour's "Lead on Construction Projects Guidelines" should be consulted for work that may disturb the lead. If lead is ever disposed, HWIN registration, Tranportation of Dangerous Goods and Ontario Regulation 347 Waste requirements would apply. Cost estimate for compliance – not applicable.	
Mercury: (from 2.2.3)	
Throughout facility – fluorescent tubes	(File photo only) 

Detailed recommendations (from Section 2.2) and Cost Estimate for Compliance:

Any worker or contractor who performs work that would disturb the lead panels should be informed of the presence of lead. As necessary, precautionary measures should be taken and personal protective equipment should be worn when handling the materials confirmed to contain lead at exposure levels exceeding 600 $\mu g/g$ (as per the Canada Hazardous Products Act). The Ministry of Labour's "Lead on Construction Projects Guidelines" should be consulted for work that may disturb the panels. If panels are ever disposed, HWIN registration, Tranportation of Dangerous Goods and Ontario Regulation 347 Waste requirements would apply.

Cost estimate for compliance – not applicable.

Ozone-Depleting Substances: (from 2.2.6)

Cedar Building - roof	

Detailed recommendations (from Section 2.2) and Cost Estimate for Compliance:

HVAC contractor shall update labelling on rooftop condensers promptly, to reflect actual refrigerant (current labelling does not show R-134a as refrigerant)

Also, for units of 5.4 tonnes cooling capacity and higher, are they leak tested annually and are the leak tests and logbooks complete and up-to-date?

Cost estimate - Should be part of current HVAC maintenance contract.

Aurora, Spruce, Lighthouse Meadow and Driftwood	
Detailed recommendations (from Section 2.2) and Cost Estimate for Compliance: The facility should ensure the contractor completes leak testing of units containing R-134A within 12 months, and that a record/service log be maintained whenever the system is serviced, leak-tested or charged (see See Environmental Conditions and Operations Audit Report section 2.2.4). Plan/budget for future replacement of refrigeration units using R-22. R-410a is a suitable replacement for some residential or light commercial uses. Cost Estimate for Compliance: Records of leak testing and service log entries should be the responsibility of the HVAC contractor, and should be covered under the existing contract, as this is a legislated requirement. Staff time only.	
Chemical Storage / Fuel and Oil Storage: (from 2.2.8 and 2.2.9)	
Various buildings	(No photo)
Detailed recommendations and Cost Estimate for Compliance: See Environmental Conditions and Audit Report (WESA, 2011)	
Radioactive Materials: (from 2.2.10)	
Cedar and Aurora Buildings	(file photo only)

	

Detailed recommendations (from Section 2.2) and Cost Estimate for Compliance:
Access and documentation concerning the radiation sources (ionizing and/or electromagnetic) was limited, as such the following recommendations are made:

The Baggage X-Ray equipment may need to be registered with the Ontario Ministry of Labour as per O. Reg. 861 Regulation respecting X-Ray Safety. Baggage X-Ray equipment is exempt under the Canadian Nuclear Safety Commission.

Insufficient information was available concerning the Ionization Unit source. CNSC and provincial regulations may apply.

The Diagnostic X-Ray equipment may require registration as per the Healing Arts Radiation Protection Act.

Cost estimate: Staff time

Mould: (from 2.2.11)	
Aurora, Borealis, Driftwood (not including ongoing program at Edgewood, Falcon, Granite, Horizon)	

Detailed recommendations (from Section 2.2) and Cost Estimate for Compliance:

Mould remediation should be carried out using the Canadian Constuction Association "*Guidelines for Mould Remediation for the Canadian Construction Industry*" (doc 82-2004) under Small-Scale Mould Growth (Less than 1 m²). Key requirements from this document are paraphrased below:

Remediation may be performed by regular building maintenance staff; however, only properly trained workers should perform mould abatement. Workers should be well informed about the hazards of mould abatement, and their training should include the use of personal protection and proper clean-up methods. Eating, drinking or smoking is prohibited in the work area.

1. Occupants shall not be present within the remediated area.
2. Workers shall be medically fit to work with potential mould exposure.
3. Workers performing Level I mould remediation shall wear a half-face piece air-purifying respirator fitted with replaceable filters (N95 minimum) or a filtering facepiece respirator (N95 minimum) and suitable eye CCA 82 - 2004 Mould Guidelines for the Canadian Construction Industry 23 protection. The selection, fitting, maintenance, and monitoring of the respirator shall meet the requirements of CSA Standard Z94.4, as amended.
4. Workers shall wear disposable coveralls and dust-impermeable gloves appropriate to the work being performed, and water-impermeable gloves when applying detergent or disinfectant.
5. Turn off HVAC systems and seal over all system openings (e.g., diffusers and return air openings) within or immediately adjacent to the work area.
6. Movable non-porous items within the work area shall be cleaned with a HEPA vacuum, followed by a suitable cleaning solution, and then removed from the work site. Fixed non-porous items within the work area shall be first cleaned by vacuuming and wet wiping, and then sealed under polyethylene sheeting, taped in place during remediation work.
7. Wherever possible, place a drop sheet below the mouldy materials to be removed.
8. Do not use compressed air mechanical devices to clean up or remove contamination.
9. Dust suppression methods should be used where possible, prior to disturbing mouldy materials.

10. Remove any porous substrate materials (ceiling tiles, drywall, etc.) well beyond the immediate areas of visible contamination; the minimum recommended distance is 30 cm in all directions.
11. After bulk removal, clean all exposed surfaces within the work area.
12. Remove all waste created by the remediation work, including, but not limited to, building debris, disposable coveralls, respirator cartridges, and plastic sheeting.
13. Clean all equipment used in the remediation work (e.g., vacuum cleaner, knives, saws) using a HEPA vacuum and by wet wiping.
14. Dispose of the waste material in compliance with local, provincial, and federal regulations.
15. Wash face and hands, and clean and maintain respirator after completion of mould abatement.
16. Leave all areas dry and visibly free from contamination and debris, and ensure that surfaces are adequately dry prior to installation of new materials.

Cost Estimate: $10,000 for remediation of all affected areas, including disposal

3.0 CONCLUSIONS

In summary, the following designated substance and hazardous materials were identified in the facility;

- Lead was identified within the wall construction (not exposed) in the x-ray diagnostic room of the health centre;
- Mercury was identified as likely present in the fluorescent bulbs throughout the facility, but not in exposed form;
- Silica was identified as likely present throughout the facility, in cement block, floors and walls, but not in respirable form. Silica may be present in respirable form in the carving shed.
- Ozone Depleting Substance R-22 was identified in three (3) freezers, two (2) walk-in freezers and in four building refrigeration systems;
- Four x-ray units (ionizing / electromagnetic radiation sources) were identified, and corresponding registration/licensing requirements could not be verified (further investigation is required);
- Small quantities of visible mould were identified;
- Fuel/oil and waste oil storage recommendations are identified within the Fenbrook Environmental Conditions and Operations Audit Report, dated February 2011; and
- Chemical storage recommendations are identified within the Fenbrook Environmental Conditions and Operations Audit Report, dated February 2011.

Restorative and precautionary measures are described in section 2.3.

It should be noted that results are only from non-intrusive sampling. For specific projects that involve renovation and/or retrofitting, intrusive sampling of building materials is recommended.

Respectfully submitted,

WESA Inc.

Lianne Sinclair, P. Eng, MBA
Auditor

Andrea Clemencio, P. Eng., EP(CEA)
Senior Engineer

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APPENDIX A

Site Plan

APPENDIX B

Laboratory Reports and Certificates of Analysis

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Certificate of Analysis

WESA Inc. (Kingston)
4 Cataraqui St.
Kingston, ON K7K 1Z7
Attn: Andrea Clemencio

Phone: (613) 531-2725
Fax: (613) 531-1852

Client PO:
Project: K-B9465-00
Custody: 7511

Report Date: 17-Feb-2011
Order Date: 15-Feb-2011
Order #: 1108081

This Certificate of Analysis contains analytical data applicable to the following samples submitted:

Paracel ID	Client ID
1108081-01	Quartz - P1
1108081-02	Quartz - P2
1108081-03	Borealis - P3
1108081-04	Borealis - P4
1108081-05	Driftwood - P5

Approved Mark Foto

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

PARACEL LABORATORIES LTD.

Order #: 1108081

Certificate of Analysis

Report Date: 17-Feb-2011
Order Date:15-Feb-2011

Client: **WESA Inc. (Kingston)**
Client PO:
Project Description: K-B9465-00

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals	EPA 6020 - Digestion, ICP-MS	16-Feb-11	16-Feb-11

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

PARACEL LABORATORIES LTD.

Order #: 1108081

Certificate of Analysis

Report Date: 17-Feb-2011
Order Date:15-Feb-2011

Client: **WESA Inc. (Kingston)**
Client PO:
Project Description: K-B9465-00

Sample Results

Lead

Matrix: Paint
Sample Date: 10-Feb-11

Paracel ID	Client ID	Units	MDL	Result
1108081-01	Quartz - P1	ug/g	50	<50
1108081-02	Quartz - P2	ug/g	50	<50
1108081-03	Borealis - P3	ug/g	50	<50
1108081-04	Borealis - P4	ug/g	50	<50
1108081-05	Driftwood - P5	ug/g	50	<50

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Lead	ND	50	ug/g						
Matrix Duplicate									
Lead	57600	50	ug/g	57200			0.7	44	
Matrix Spike									
Lead	46.8		ug/L	ND	93.6	80-120			

Paracel Order #: 1108081

CHAIN OF CUSTODY RECORD Record No.: 7511	QUOTATION NO:	SHIPPED TO: (Laboratory) PARACEL

WESA A Better Environment For Business

- ☐ 3108 Carp Road, P.O. Box 430, Carp, ON K0A 1L0 (613) 839-3053
- ☐ 182 Victoria St. S. Kitchener, ON N2G 1B9 (519) 742-6685
- ☒ The Tower, The Woolen Mill, 4 Cataraqui St. Kingston, ON K7K 1Z7 (613) 531-2725
- ☐ 280 Larch St., Sudbury, ON P3B 1M1 (705) 525-6075
- ☐ 44 Upjohn Road, Toronto, ON M3B 2W1 (416) 383-0957

PROJECT FILE NO.: K-B9465-00

SAMPLER: (Print & Sign) Brad M'Callum / Brad M'Callum

SAMPLE NO.	COLLECTION Time	COLLECTION Date	# OF CONTAINERS	SAMPLE MATRIX	TURN AROUND TIME	TEST (S) REQUESTED (X): Lead										COMMENTS	CRITERIA REQUIRED (i.e. MOE Reg. 153/04, CCME, PWQO, ODWA, Quebec) Other:
Quartz - P1	AM	Feb 10-11	1	P	S	✓											
Quartz - P2	AM	Feb 10-11	1	P	S	✓											
Borealis - P3	AM	Feb 10-11	1	P	S	✓											
Borealis - P4	AM	Feb 10-11	1	P	S	✓											
Driftwood - P5	AM	Feb 10-11	1	P	S	✓											

REPORT TO: (Project Manager)	E-MAILED TO (e-mail address)		SPECIAL REQUESTS:
Andrea Clemencio	aclemencio@wesa.ca ☒ PDF ☐ Spreadsheet	☐ Fax Preliminary Results ☐ Hard Copy	P= Paint
SHIPPING OF HAZARDOUS ITEMS:	SHIPPED BY:		copy results to bmccallum@wesa.ca

RELINQUISHED: (Signature)	DATE	TIME	RECEIVED BY: (Signature	DATE	TIME	MATRIX	TURN-AROUND TIME
Brad M'Callum	Feb 15/11	4:00pm	[signature]	Feb. 16/11	9:48am	AIR = A SOIL = S WATER = W OTHER = O	RUSH = R 48-HOUR = T 5-DAY = F STANDARD = S
RELINQUISHED: (Signature)	DATE	TIME	RECEIVED BY: (Signature	DATE	TIME		

Copies: White-Sampler, Yellow-Laboratory, Pink-With Report

APPENDIX C

Photographs

	Driftwood Building – D-173Flammable storage cabinet containing Vinyl Cement
	Driftwood Building – D-173Flammable storage cabinet containing Vinyl Cement
	Driftwood Building – D-137 12% Swish Chlorine Bleach storage. Stored on Containment tray behind locked fence.

	Driftwood Building – D-137 Hazardous Material Storage
	Driftwood Builing – D145 Chemical Storage
	Driftwood Building – D177 All purpose Cleaner storage

	Typical thermostat- Potential source of mercury
	Typical thermostat - Potential source of mercury
	Typical light ballast

	Nova Building – exterior plastic hazardous materials hut
	HVAC room – refrigeration equipment containing R134A
	Driftwood building – cleaning chemicals

	Nova Building – Diesel day tank in concrete secondary containment
	Nova Building – various maintenance chemicals for heating equipment
	Nova Building – exterior diesel aboveground storage tanks

	Nova Building – recirculating loop additives
	Nova Building – various maintenance chemicals for heating equipment
	Driftwood Building – spill kit

APPENDIX D

Drawings

See FI DESIGNATED SUBSTANCES

ATT 11