

HAZARDOUS WASTE MATERIALS MANAGEMENT PLAN

Prepared for:

***IQALUIT INTERNATIONAL AIRPORT IMPROVEMENT PROJECT
BBC-SINTRA JOINT VENTURE***

March 2015

Final – Rev 3.0


O/Ref.: QE14-214-11

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Prepared and reviewed by:



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1. GENERAL

1.1. OBJECTIVES

- 1.1.1. The release of any hazardous materials into the environment will be avoided during their handling.
- 1.1.2. Spills and/or incidents will be reported as per the Spill Emergency Plan.
- 1.1.3. In the event of a spill, the emergency response plan will be invoked and appropriate action will be taken as per the Spill Emergency Plan.
- 1.1.4. Hazardous materials will be stored in their original containers until their use. Intermediate containers used for hazardous materials will be certified for use with the type of hazardous material stored in it.
- 1.1.5. Hazardous waste materials will be placed in Transport of Dangerous Goods (TDG) approved containers, if required, for storage and transport to the disposal facility, and the containers will be transported to a Temporary Hazardous Waste Transfer Facility (THWTF).
- 1.1.6. Free product and other liquid hazardous waste materials will be pumped into TDG approved containers, if required, for storage and transport to the disposal facility, and containers will be transported to the THWTF.
- 1.1.7. Drums will be removed and sorted according to the contents. Where necessary, by the condition of the drum, or as required by TDG regulations. Drum contents will be repackaged into sound drums or overpack drums if required by TDG regulations.
- 1.1.8. Each “hazardous material” will be packaged and labelled in accordance with the “Class” and “Packing Group” as per the TDGA.
- 1.1.9. Hazardous waste materials will be shipped to the south for disposal a minimum of once per year, or more frequently if possible.

1.2. REGULATIONS

- 1.2.1. All work will be conducted in accordance with all appropriate Federal, Territorial and Provincial legislation, and international conventions.
 - 1.2.1.1. The following federal laws, regulations, codes and guidance documents may apply to the management of hazardous materials:
 - Environmental Emergency Regulations SOR/2003-307.
 - Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations SOR/2005-149.
 - Interprovincial Movement of Hazardous Waste Regulations SOR/2002-301.
 - TRANSPORTATION OF DANGEROUS GOODS ACT, 1992 S.C. 1992, c. 34:
 - Transportation of Dangerous Goods Regulations SOR/2001-286.
 - Transportation of Dangerous Goods Regulations - Schedules SOR/2001-286.

1.2.1.2. The following Nunavut Territorial Legislation and Guidelines may apply to the management of hazardous materials:

- ENVIRONMENTAL PROTECTION ACT R.S.N.W.T. 1988, c. E-7
 - A Guide to the Spill Contingency Planning and Reporting Regulations January 2002.
 - Environmental Guideline for Contaminated Site Remediation November 2003.
 - Environmental Guideline for Waste Lead and Lead Paint.
 - Guideline for Ozone Depleting Substances.
 - Guideline for the General Management of Hazardous Waste in the NWT.
 - Guideline for the Management of Waste Antifreeze.
 - Guideline for the Management of Waste Batteries.
 - Guideline for the Management of Waste Paint.
 - Guideline for the Management of Waste Solvents.
 - Guideline for Dust Suppression, February 1998.
 - Spill Contingency Planning and Reporting Regulations R-068-93.
 - Used Oil and Waste Fuel Management Regulations R-064-2003.
- Plain Language Guide to the Used Oil and Waste Fuel Management Regulations.
- TRANSPORTATION OF DANGEROUS GOODS ACT, 1990 RSNWT (Nu) 1988, c 81 (Supp).
- Transportation of Dangerous Goods Regulations 1991, NWT Reg (Nu) 095-91.
- WSCC's Northwest Territories & Nunavut Codes of Practice for Asbestos Abatement.

1.2.2. Hazardous Waste is defined as any waste that may cause contamination to the environment or is regulated by the federal TDGA Regulations.

1.2.3. Materials containing asbestos will be handled in accordance with all applicable regulations and guidelines.

2. MANAGEMENT

2.1. SAFETY

2.1.1. Only trained individuals or individuals working under the direct supervision of trained persons will be allowed to handle or transport dangerous goods.

2.1.2. Site personnel handling hazardous waste materials will be required to wear personal protection equipment in accordance with The MSDS (or the SDS under the WHMIS-GHS) guidelines and/or Federal, Territorial or NIOSH guidelines, whichever is the most stringent.

2.1.3. Appropriate protection to the potential type and level of exposure will be provided to all workers. Specific safety protocols will be established prior to commencing activities involving Hazardous Materials.

- 2.1.4. Suitable safety clothing and equipment will be provided, as required during the course of the work. Sufficient quantities of protection equipment will be supplied to fit all site personnel.

2.2. TRANSPORTATION & STORAGE

- 2.2.1. Individuals shipping and receiving hazardous waste materials will be licensed under the Transport of Dangerous Goods Act (TDGA) Regulations.
- 2.2.2. Hazardous materials will be transported to and from Iqaluit via sealift or aircraft. The hazardous materials will be packaged according to all applicable regulations. The carrier of the hazardous materials will be required to obtain all permits and licences required for the transport of dangerous goods.
- 2.2.3. Hazardous materials will be stored at the hazardous materials storage area until use. The location of the hazardous materials storage area can be found on figure CC-115 in Appendix C. The area is identified in orange on the drawing.
- 2.2.4. Hazardous Waste Materials will be transported and stored at a Hazardous Waste Transfer Facility (HWTF) in Iqaluit when awaiting sealift. The location of the HWTF is shown on figure CC-115 in Appendix C. The locations of the HWTF are shown in yellow in the figure. This site will be for the storage of potential hazardous waste materials for inspection, testing, classification and packaging, as well as for the building and packaging of drum liquids and sediments. Should the Hazardous Waste Materials need to be stored for more than 180 days, they are planned to be stored at Qikiqtaaluk Environmental's Hazardous Waste Transfer Facility located at 1571 Kakivak Court, located in the North 40 Area of Iqaluit.
- 2.2.5. All Hazardous Waste Materials will be transported to the south for disposal according to the requirements of the provincial authority where the disposal will occur.
- 2.2.6. Please refer to the Spill Contingency Plan for the location and maintenance of storage locations.

2.3. PRODUCTS & EQUIPMENT ON-SITE

- 2.3.1. All storage containers will satisfy requirements of the latest Transportation of Dangerous Goods Act and Regulation (marine and ground transportation).
- 2.3.2. A full range of cleanup and protective equipment will be provided at the site to contain and cleanup spills, and protect personnel, as required. The cleanup equipment will include booms (sorbent and containment), sorbents for cleanup, fire extinguishers for A-B-C fires, waste bags for contaminated soils, pumps, hand shovels, picks and containment barriers, such as plastic sheeting. Personnel protective equipment will include clothing, protective suits, respirators, etc. to comply with potential emergency conditions and in accordance with NIOSH guidelines.

- 2.3.3. List of known hazardous materials and hazardous waste to be managed on site is presented in Appendices A and B.

2.4. INVENTORY, INSPECTION & RECORD KEEPING

- 2.4.1. An up to date inventory of hazardous materials stored at the work site will be maintained by Quality/Safety/Environment (QSE) Manager for IIAIP. These records will be updated daily, and kept at the Design-Builder Iqaluit office.
- 2.4.2. All unsecured storage areas used for the storage of hazardous materials will be visually inspected at a minimum of once per week during operations by the Superintendent for IIAIP. Observations will be logged, dated and kept in the Design-Builder Iqaluit office.
- 2.4.3. Drums and storage containers will be inspected to ensure that symbols, words or other marks identifying the contents are present and legible. They will also be inspected for signs of deterioration or damage or signs that the drum/container is under pressure such as bulging and swelling, leaks or discoloration of the drum/container material. If leaks or deterioration are encountered they will be noted and addressed in a timely manner as per the spill plan.

2.5. DISPOSAL

- 2.5.1. As agreed with the City of Iqaluit non-hazardous wastes will be disposed of at the City's landfill, according to the City's procedures and requirements (segregation of wood and paper from metals and plastic wastes).
- 2.5.2. All hazardous and non-hazardous wastes to be disposed of outside Iqaluit will be sent to a facility registered with the applicable territorial or provincial jurisdiction to manage that type of waste.
- 2.5.3. All hazardous waste to be shipped south will be managed by QE through its waste transfer centre in Iqaluit, licensed with the Government of Nunavut., or other approved operator. The final disposal sites used for disposal or recycling will be provided in the annual report to the Nunavut Water Board. This will include the certificates of authorisation from authorities having jurisdiction that the disposal sites can receive the types of waste disposed of at their facility. Final certificates of disposal or recycling will also be provided in the annual report.

Appendix A

Hazardous Materials to be Used and Stored at the Work Site

Item	UNIT	2014	2015	2016	2017	COMMENTS
SOLID						
BITUMEN DRUM	Drums		12111	8881	8558	29550 drums
TACK COAT DRUM	Drums		206	174	158	538 drums
BATTERIES	Units		5	3	2	10 batteries
LIQUID						
OIL & LUBRICANTS	liters		4600	4600	4600	
COOLANT	liters		1150	1150	1150	

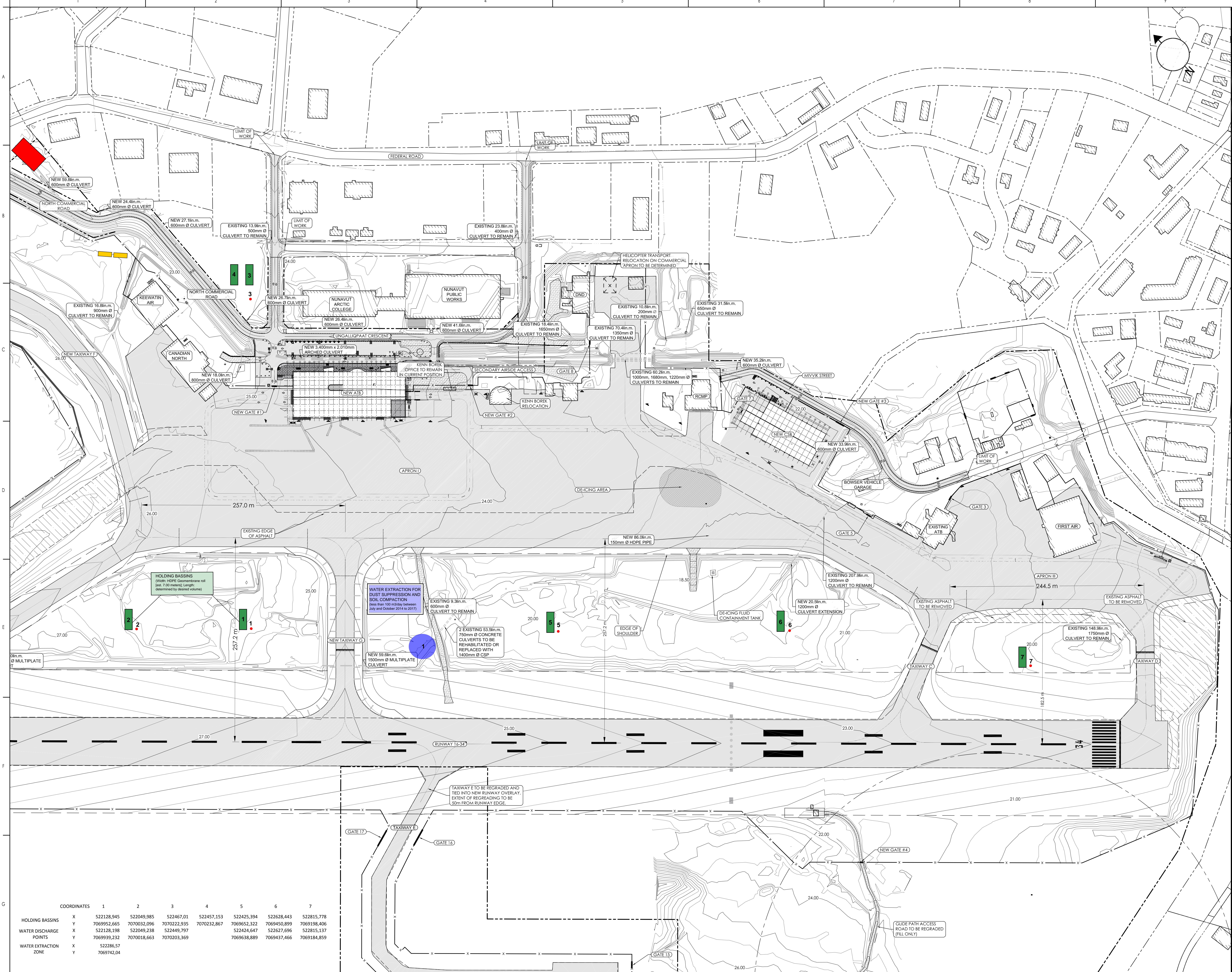
Appendix B

Hazardous Waste Expected to be Generated and Stored at the Work Site

<u>ITEM</u>	<u>UNIT</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Remediation Method</u>
SOLID WASTE						
BATTERIES	kg	0	50	50	100	Package in container and ship south
BITUMEN DRUM	tons	0	75	55	53	Place in container and ship south
TACK COAT DRUM	kg	0	13	11	10	Place in container and ship south
TIRE	kg	0	500	500	500	Municipal Solid Waste
OILY RAGS	kg	50	100	100	100	Package in container and ship south
OIL FILTERS	kg	100	250	250	250	Package in container and ship south
LIQUID WASTE						
USED OIL & LUBRICANT	liters	-	4000	4000	4000	Package in container and ship south
COOLANT	liters	-	1000	1000	1000	Package in container and ship south
PORTABLE WASHROOM WASTE (5 UNITS)	tons	2,0	6,8	6,8	3,4	Disposal with the City of Iqaluit

Appendix C

Figure Showing Location of Storage Areas



CLIENT

ARCTIC INFRASTRUCTURE PARTNERS

Stantec Architecture Ltd.
Stantec Consulting Ltd.
101 60-112 Street, Suite 200
Edmonton, AB T5K 2L6

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The Contractor shall verify and be responsible for all dimensions, DTM, HGT, and other data shown on this drawing. The Contractor shall verify and be responsible for all dimensions, DTM, HGT, and other data shown on this drawing. The Contractor shall verify and be responsible for all dimensions, DTM, HGT, and other data shown on this drawing.

Keyplan

Legend

PROPERTY LINE

FENCE

GUARDRAIL

CULVERT

VAULT

BOLLARD

BOULDER

AIRFIELD FLOODLIGHT

POWER POLE

ELECTRICAL LIGHT

HAZARDOUS WASTE STORAGE

BITUMEN DRUMS STORAGE

WATER DISCHARGE POINT

HOLDING BASIN

ASPHALT PAVEMENT

CONCRETE

REINFORCED CONCRETE

STAMPED CONCRETE

UNPAVED SURFACE

EXISTING OVERHEAD POWER

NEW OVERHEAD POWER

TYPE 1 CRACK

TYPE 2 CRACK

TYPE 3 CRACK

Revision

5. Issued for Final Design - STAMPED	LM	RH	2014.07.17
4. Issued for Final Design	LM	RH	2014.06.12
3. Issued for Final Design	LM	RH	2014.06.13
2. Response to Interim Design #2 Comments	LM	RH	2014.03.07
1. First Issue to GN	LM	RH	2013.12.09

By: [Signature] App: [Signature]

Revision

ISSUED FOR FINAL DESIGN - STAMPED	LM	RH	2014.07.17
ISSUED FOR FINAL DESIGN	LM	RH	2014.06.12
ISSUED FOR FINAL DESIGN	LM	RH	2014.06.13
DESIGN PACKAGE #3 - INTERIOR GLAZING, PARTITIONS, INTERIOR FINISHES, DOOR FRAMES AND HARDWARE, MILLWORK, FURNITURE & SIGNAGE	LM	RH	2014.03.07
DESIGN DEVELOPMENT REVIEW OF BUILDING ENVELOPE, MAINTENANCE - INTERIM DESIGN #2	LM	RH	2013.12.09

By: [Signature] App: [Signature]

Permit-3ed

Project

IQALUIT INTERNATIONAL AIRPORT
IMPROVEMENT PROJECT
IQALUIT - NUNAVUT - CANADA

Title

PROPOSED SITE GRADING PLAN

Project No.

144313128

Scale

1:1,500

Date

2014-JULY-17

Revision

5

Drawing No.

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CC-115