



PROJECT REGISTRATION AND REVIEW SUBMISSION – ON-SITE CENTRIFUGE PROCESS

NEWALTA FOXTRAP HAZARDOUS WASTE/WASTE DANGEROUS GOODS MANAGEMENT FACILITY

Submitted to:

Director – Environmental Assessment Division
Department of Environment and Conservation
PO Box 8700
St. John's, NL A1B 4J6

Prepared by:

Newalta Corporation
3 Spectacle Lake Drive, Suite 290
Dartmouth, NS B3B 1W8

March 19, 2013

NEWALTA

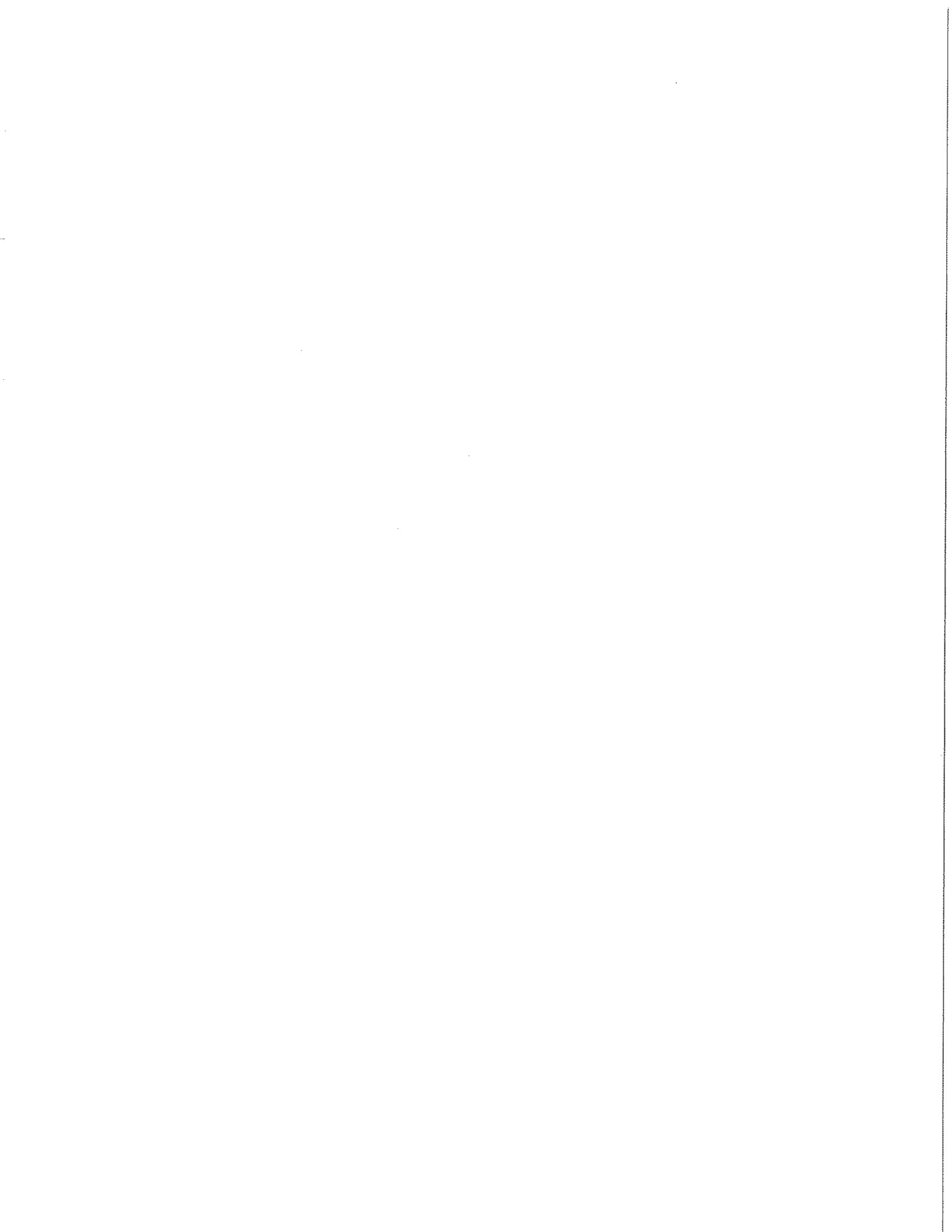
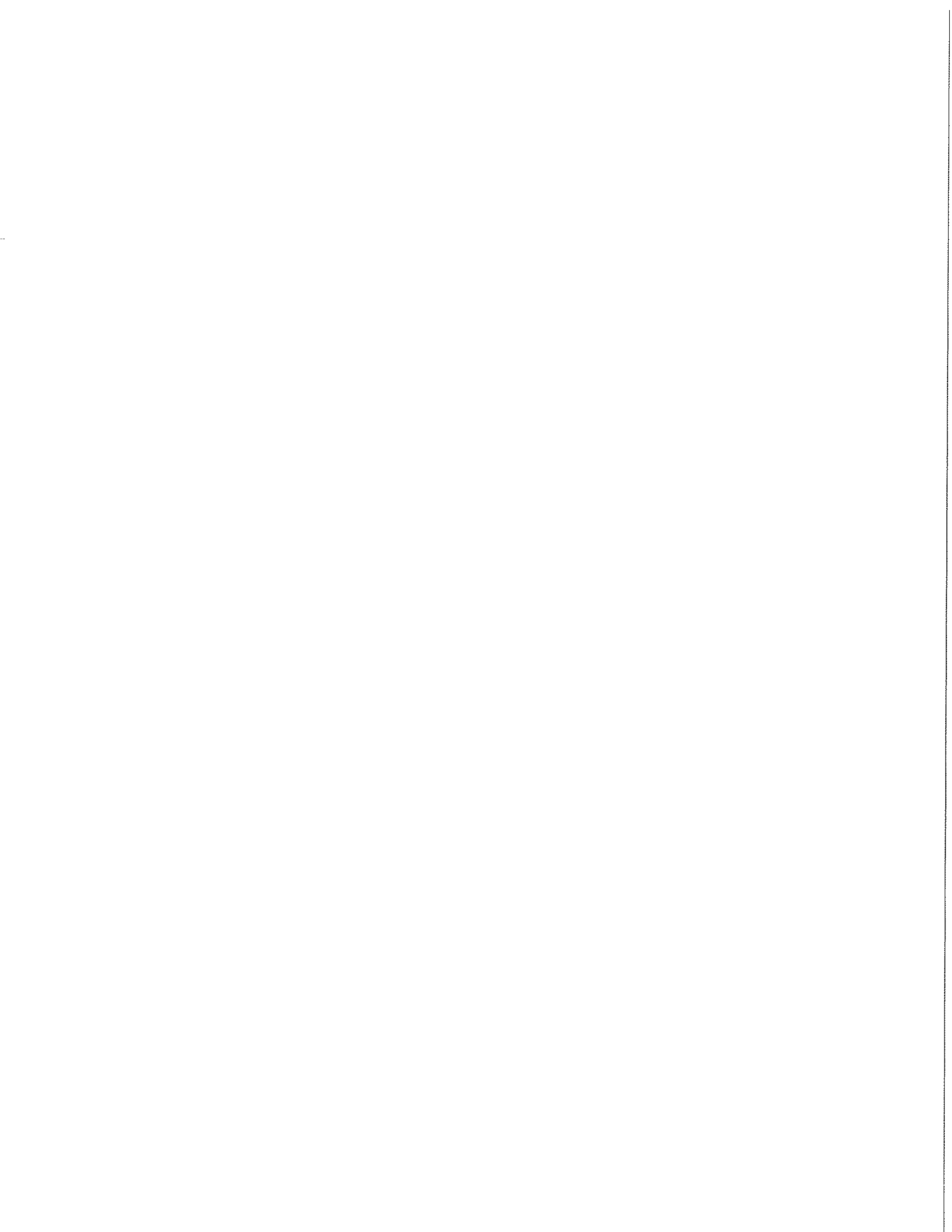


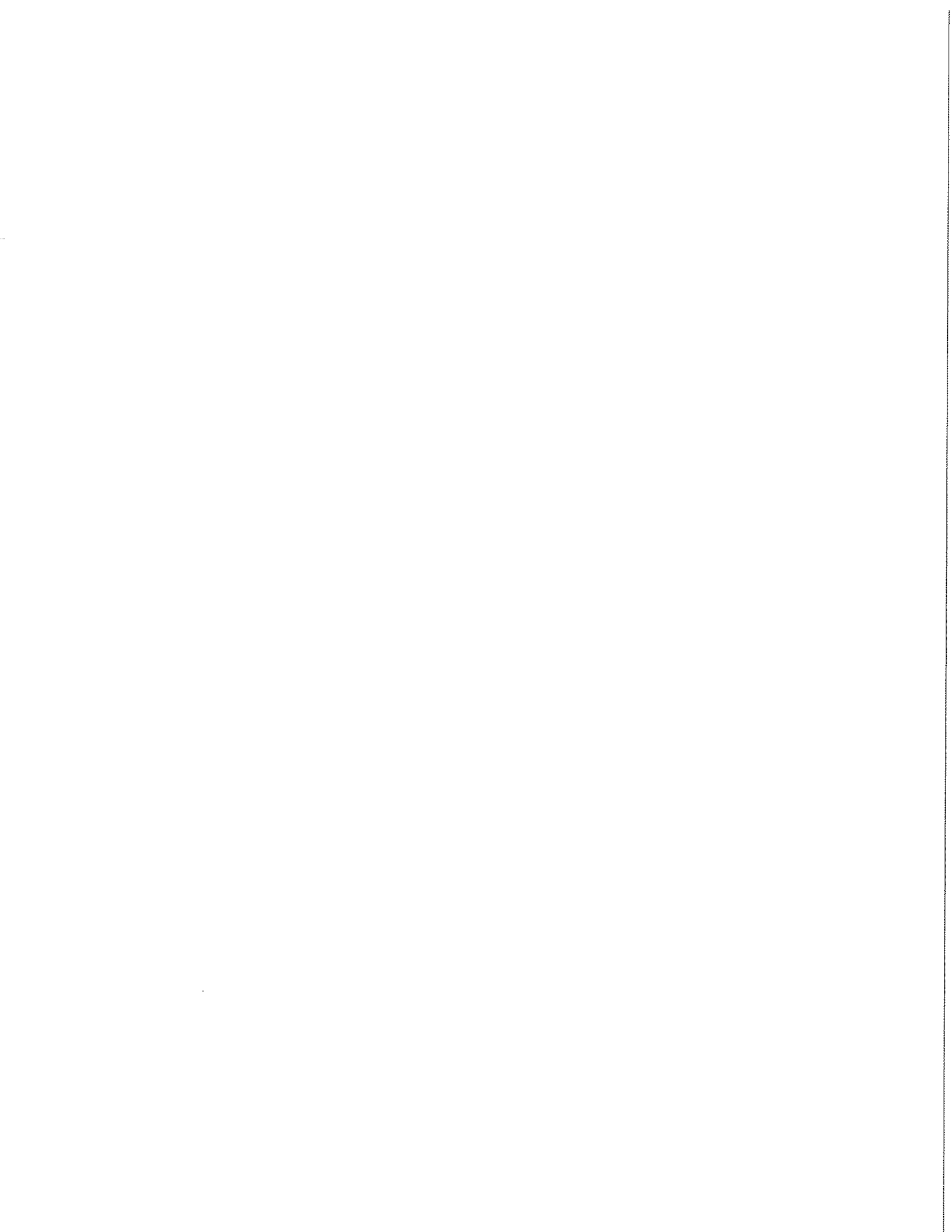
TABLE OF CONTENTS

1	General Information	1
1.1	Project Name and Newalta Corporation Company Information	1
1.2	Project Information.....	2
2	On-Site Centrifuge Process Description	3
2.1	Geographical Location.....	3
2.2	Physical Features	5
2.3	Construction	7
2.4	Operation.....	8
2.5	Occupations.....	9
2.1	Project Related Documents	10
3	Approval of the Undertaking	10
4	Schedule.....	10
5	Funding.....	11
6	Closure	11
Appendix 1	12	12
	Phase I Environmental Site Assessment.....	12
Appendix 2.....	13	13
	Certificate of Approval.....	13
Appendix 3.....	14	14
	Certificate of Insurance	14
Appendix 4	15	15
	Letter of Good Standing	15
	NLCSA.....	15
Appendix 5	16	16
	Risk Management Manual (RMM).....	16
	Table of Contents	16
Appendix 6	17	17
	Emergency Response Plan (ERP)	17
	Table of Contents	17



Newalta Foxtrap Facility Centrifuge Project
March 19, 2013

Appendix 7	18
Site Plan /	18
Equipment Layout	18
Appendix 8	19
Property Survey	19



1 GENERAL INFORMATION

1.1 Project Name and Newalta Corporation Company Information

Project Name: Foxtrap On-Site Centrifuge Process

Legal Name of Business: Newalta Corporation (herein referred to as "Newalta")

Street Address: 3 Spectacle Lake Drive, Suite 290
Dartmouth, Nova Scotia B3B 1W8

Phone Number: (902) 720-4002

Fax Number: (902) 720-4003

E-mail address: BLocke@newalta.com

Structure of Business: Incorporated Company

Nature of Business: Environmental Services, Industrial Waste Management

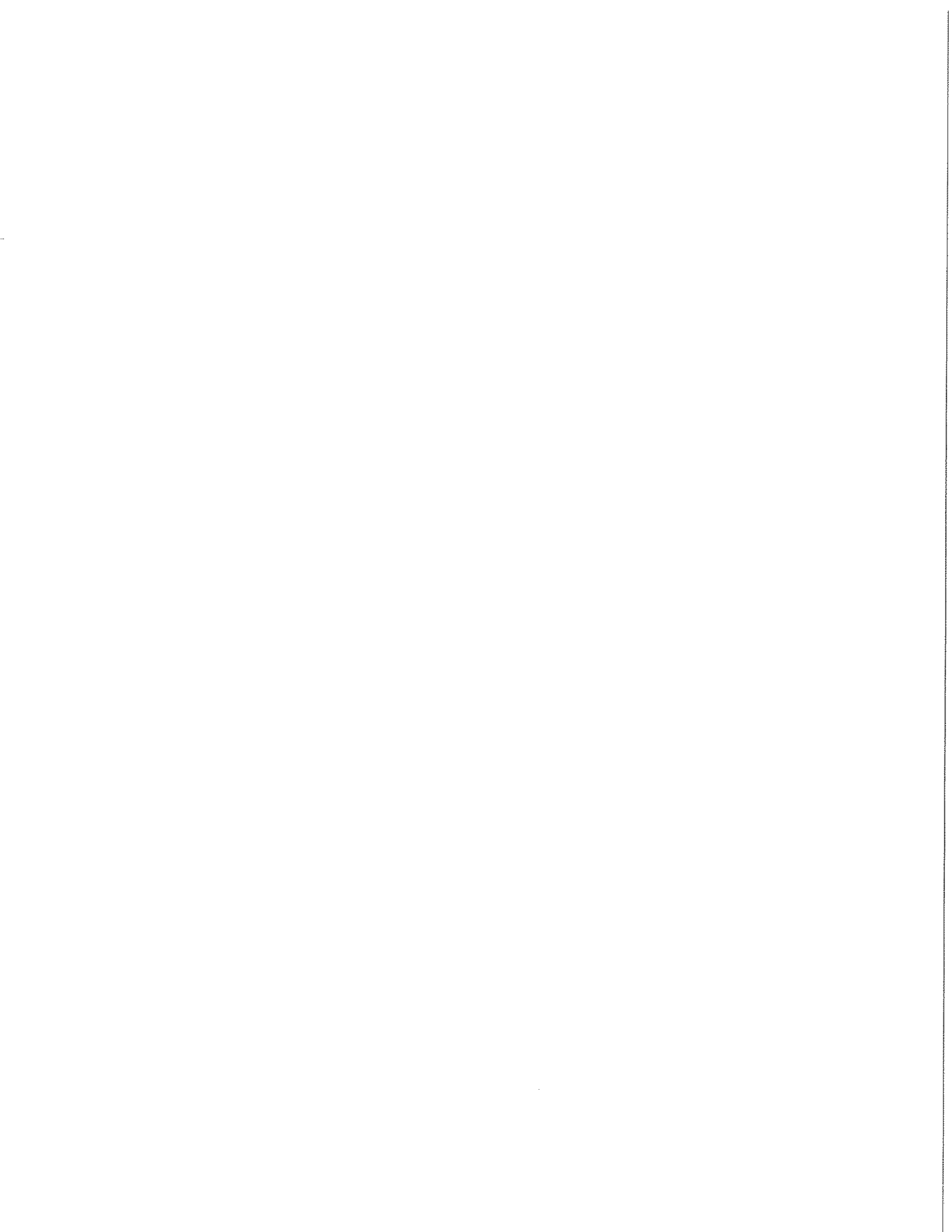
Website: www.newalta.com

Newalta Contacts:

President and CEO: Alan Cadotte
Phone Number(s): (403) 806-7025 (office)
(403) 540-2953 (mobile)
Fax Number: (403) 806-7031
Email address: ACadotte@newalta.com

Environment, Health and Safety Manager: Bill Locke*
Phone Number(s): (902) 720-4024 (office)
(902) 499-7880 (mobile)
Fax Number: (902) 720-4003
Email address: BLocke@newalta.com

* Principal contact person for purposes of environmental assessment.



1.2 Project Information

1.2.1 Project Background

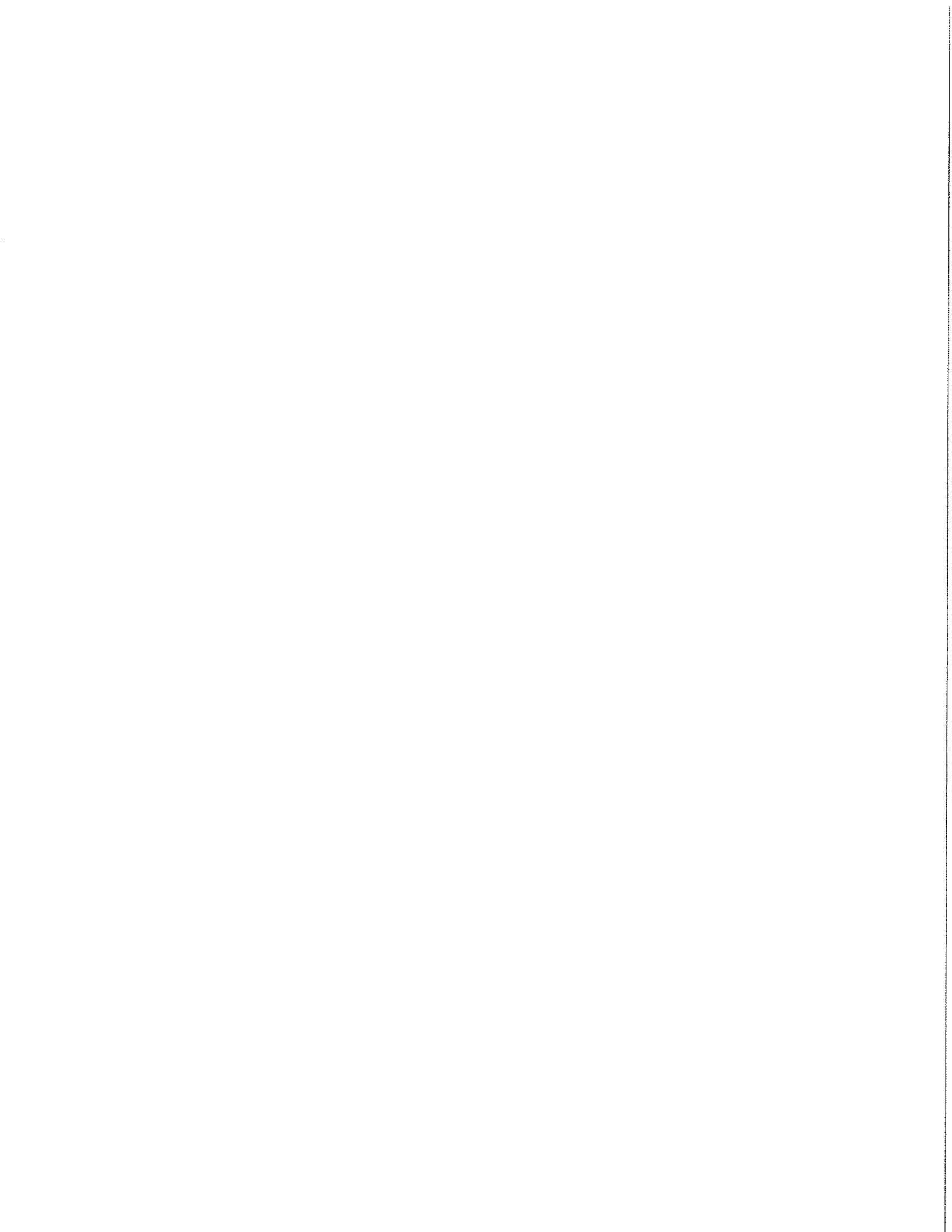
Newalta's Foxtrap location consists of an approved hazardous waste transfer facility (approval #WMS06-09-015) and associated transport equipment.

Non-hazardous waste drilling mud is currently collected stored and subsequently transported to Newalta's remediation facility located in Beech Hill, Nova Scotia (Nova Scotia Approval # 92100-30). Presently there are no treatment or disposal options for off-shore drilling muds in Newfoundland.

The lack of on-island options for off-shore generated drilling mud creates both an environmental liability and transportation challenge. To reduce environmental liability and the environmental footprint of our operations, an onsite solution has been identified for the processing of off-shore drilling mud. Field trials conducted at our Sussex, NB approved facility (NB Approval # I-7526) have successfully processed off-shore drilling mud into recoverable components (i.e., hydrocarbons, water and solids) for beneficial re-use.

1.2.2 Project Purpose

To provide a Newfoundland solution to manage non-hazardous waste drilling mud from Newalta's off-shore petroleum clients, the Foxtrap facility requires the addition of one centrifuge and four, 80 m³ (500 bbl.), handling tanks to support the operation. The addition of the proposed centrifuge provides an on island solution to separate the drilling mud into its three recoverable components including hydrocarbons, water, and solids. This process is expected to recover additional components for beneficial re-use and recycling as well as reduce the amount of material transported out of province.



2 ON-SITE CENTRIFUGE PROCESS DESCRIPTION

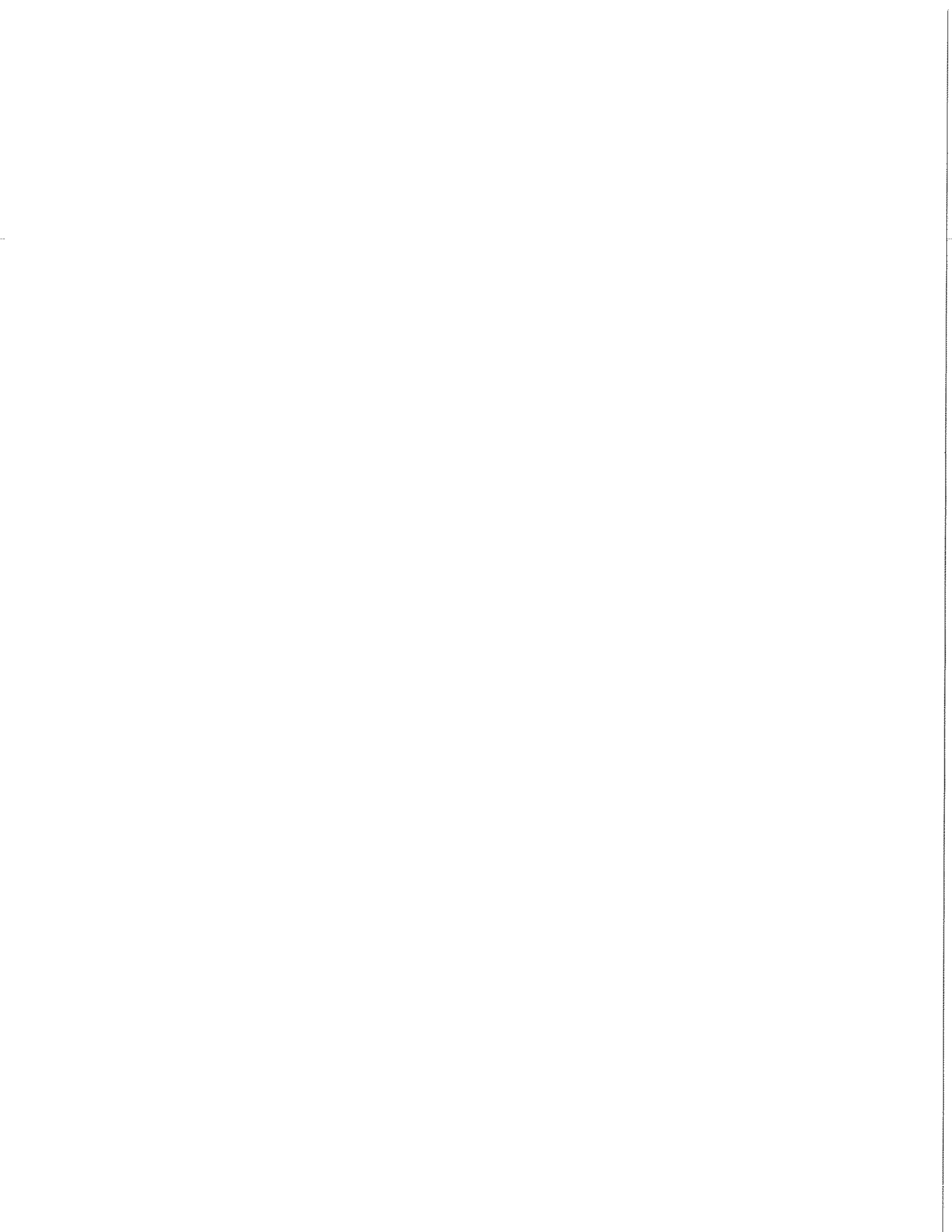
The Newalta Foxtrap facility currently provides industrial waste management services for oil and gas, mining, hydro sectors companies and government institutions. The existing location is ideally suited to justify the on-site centrifuge process.

2.1 Geographical Location

The Newalta Foxtrap facility is located at 349 Incinerator Road off Route 61 in the city of St. John's, approximately 20 km from city centre. Please refer to Figures 1 and 2 for aerial views of the facility and figure 3 for a map view.

Figure 1 - Aerial view of Foxtrap Facility.





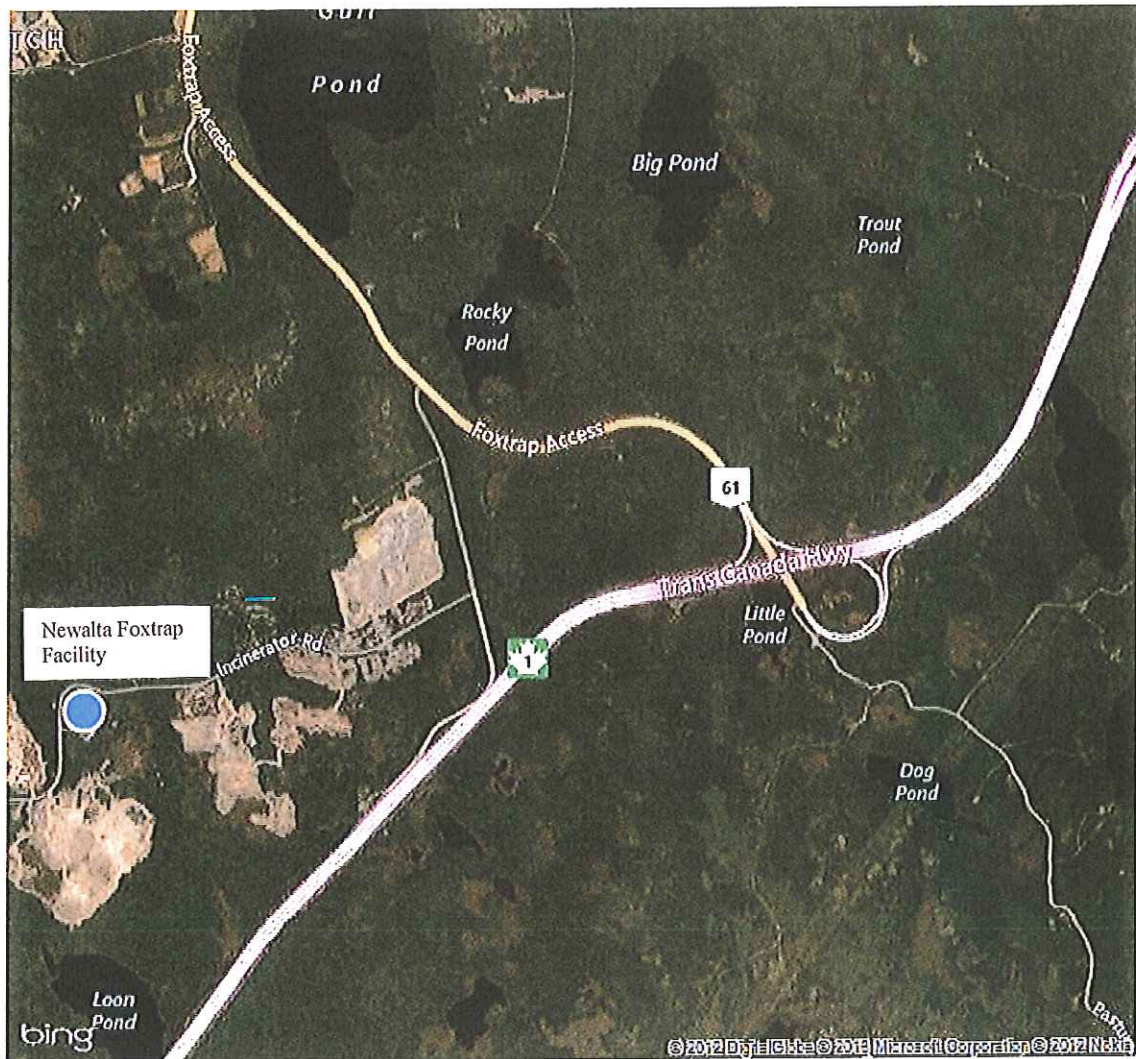
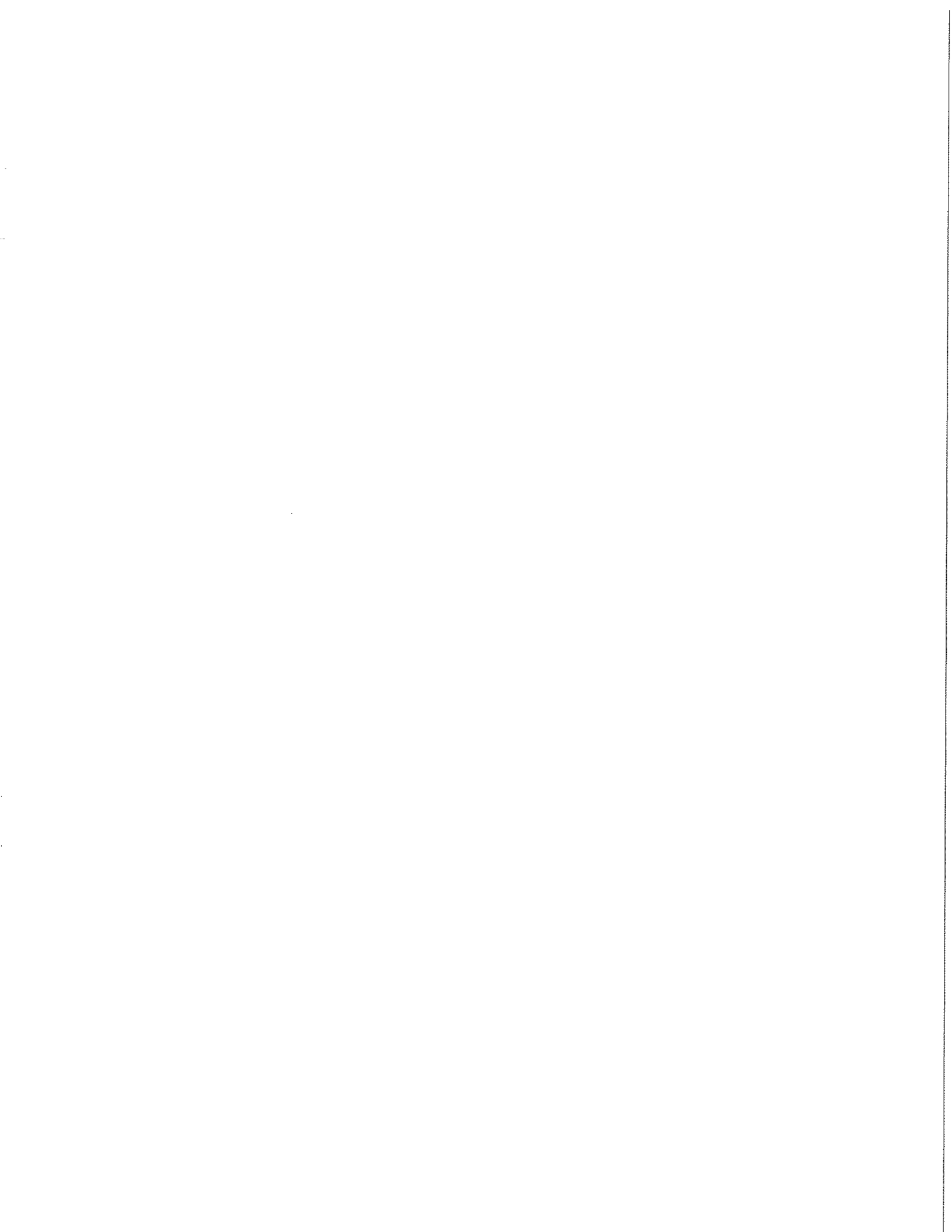
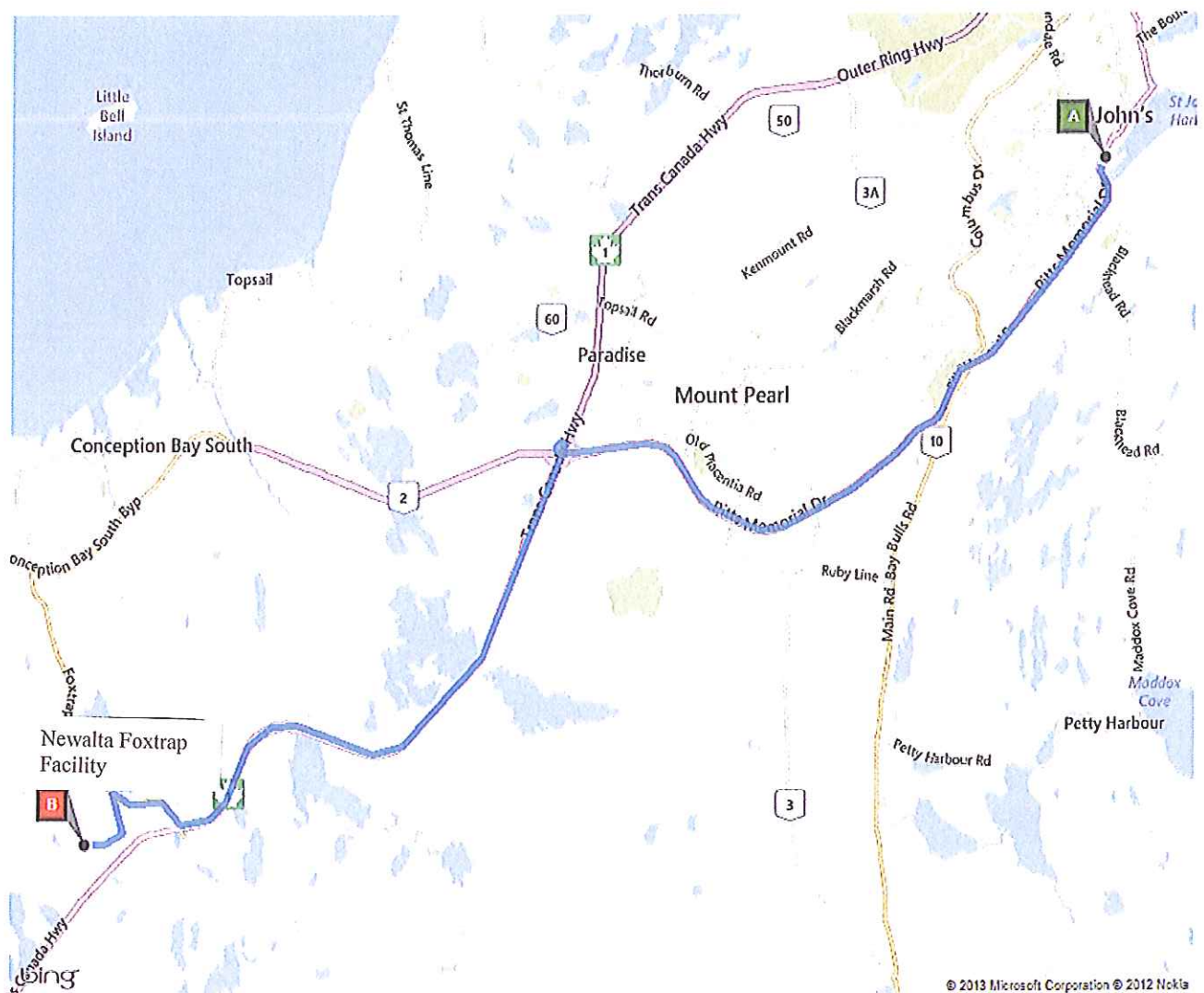


Figure 2 Aerial view of Foxtrap Facility





2.2 Physical Features

The Foxtrap location is completed fenced with a controlled access gate. Access to the facility is restricted to facility personal only. Anyone visiting the site for any purpose must complete a site orientation and sign the visitor log prior to gaining access. All visitors are accompanied by Newalta personal.

The site has a main office at the entrance to the facility, an 8000 sqft warehouse and a storage building. The front section of the main warehouse contains hygiene facilities, several small office, mud room, locker room, and electrical room. The majority of the warehouse footprint is used for the existing operations.

The facility is monitored by facility staff during normal business hours and by closed loop video surveillance during non-operating hours. Typical hours of operation are 7am to 7pm 7days per week. The centrifuge processing equipment will be set up as highlighted in Figure 4 below.

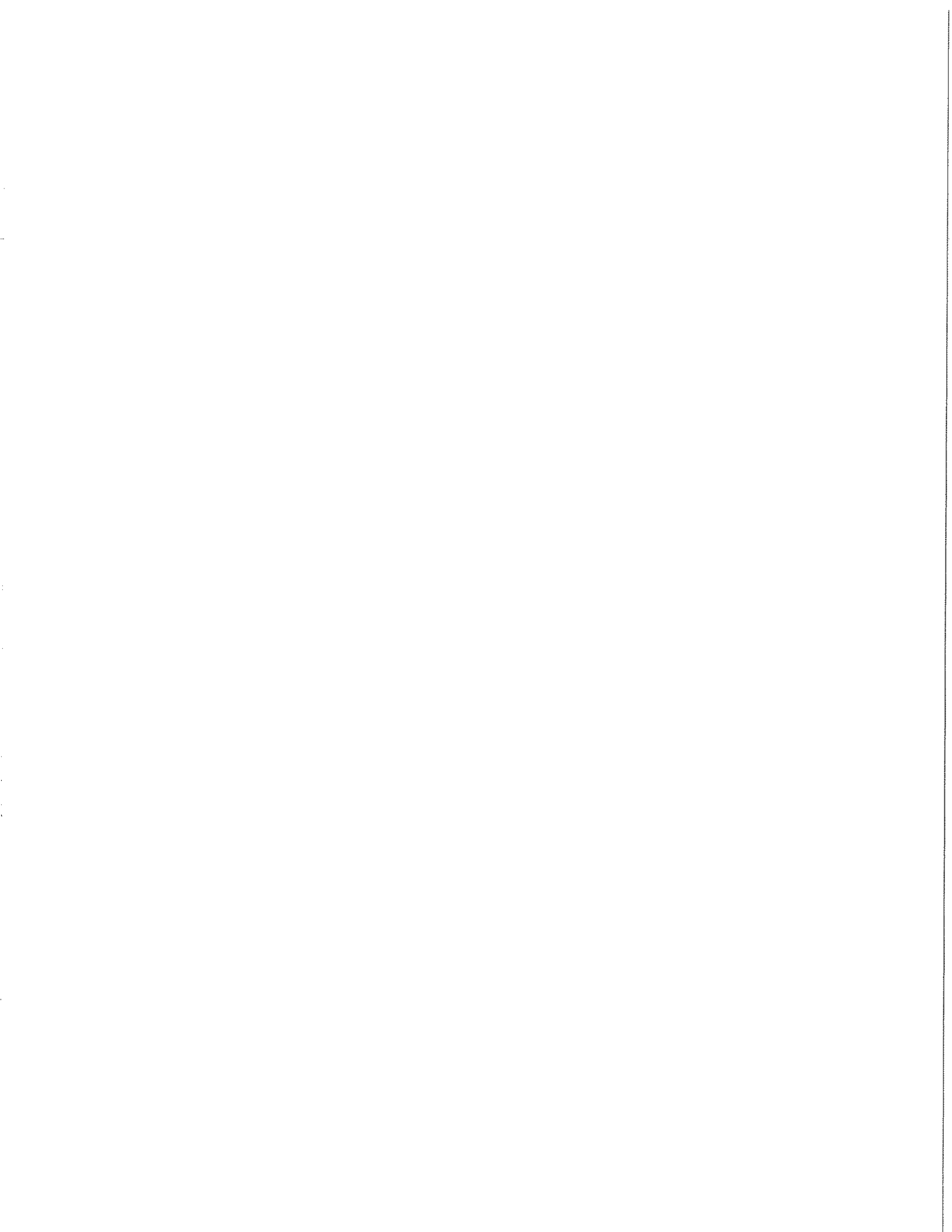
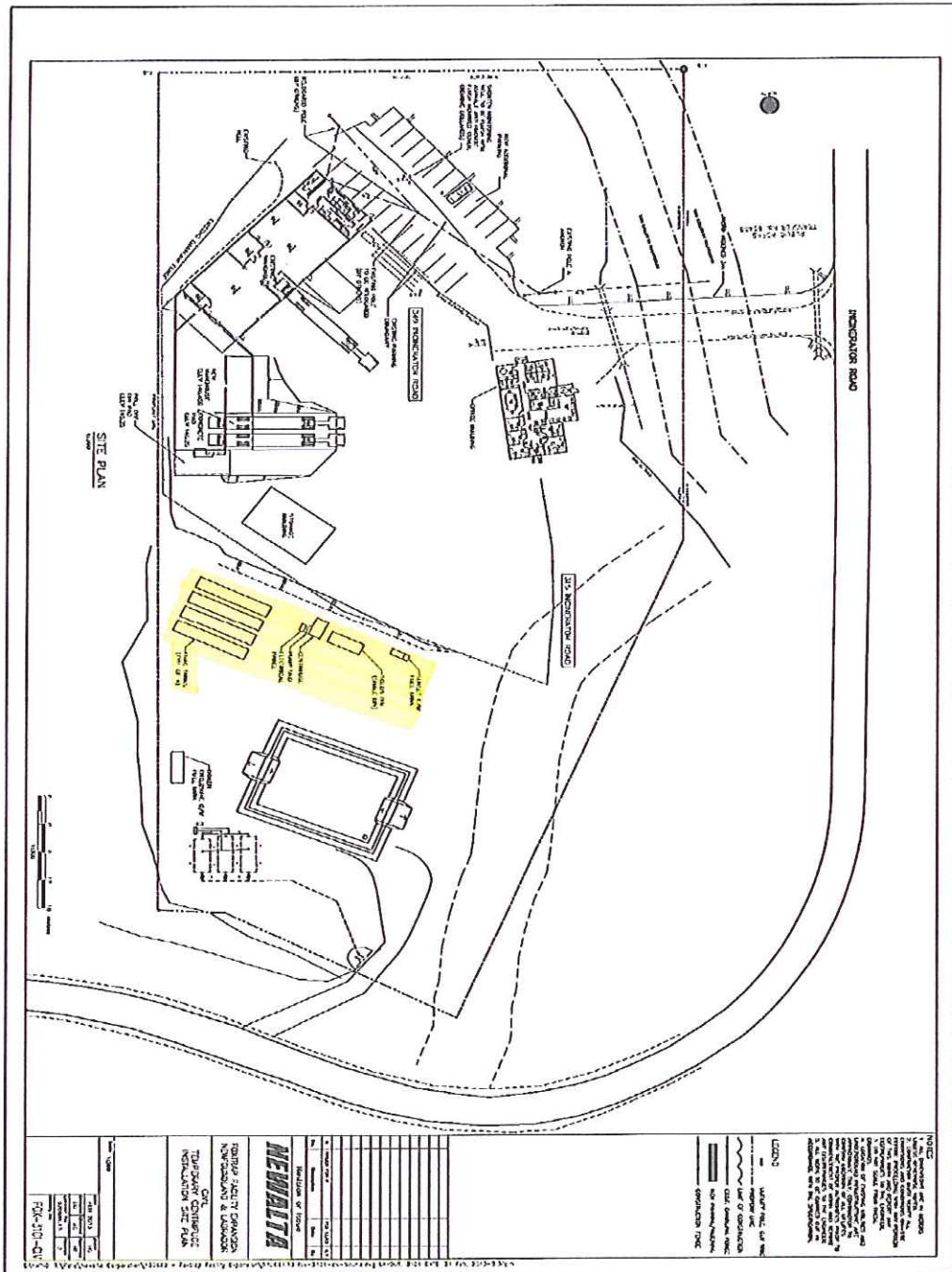
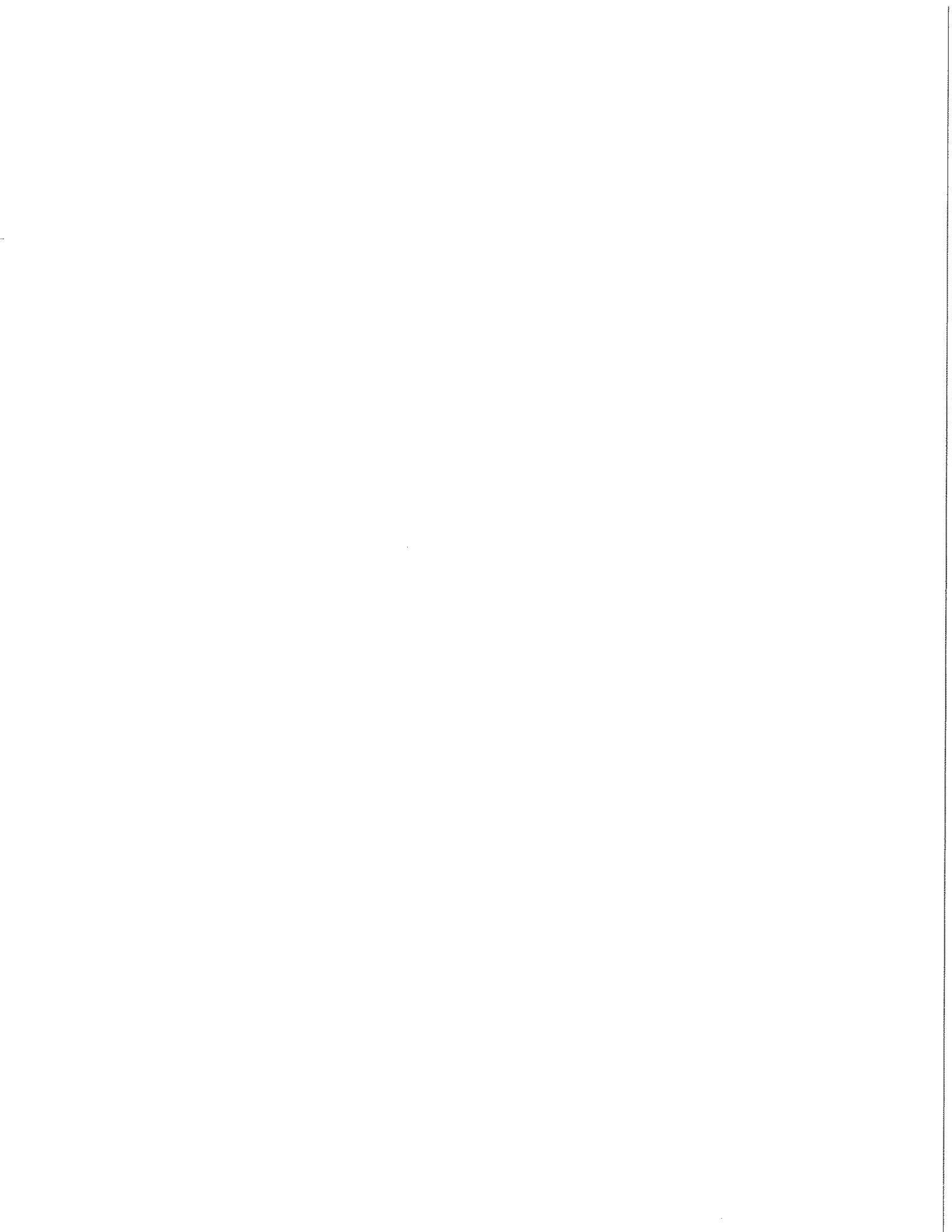


Figure 4: Facility Foot Print (see also appendix 7)





The proposed centrifuge and associate equipment with be located inside the existing footprint of the Foxtrap facility. The centrifuge and equipment will be place inside engineered secondary containment systems. See figure 5

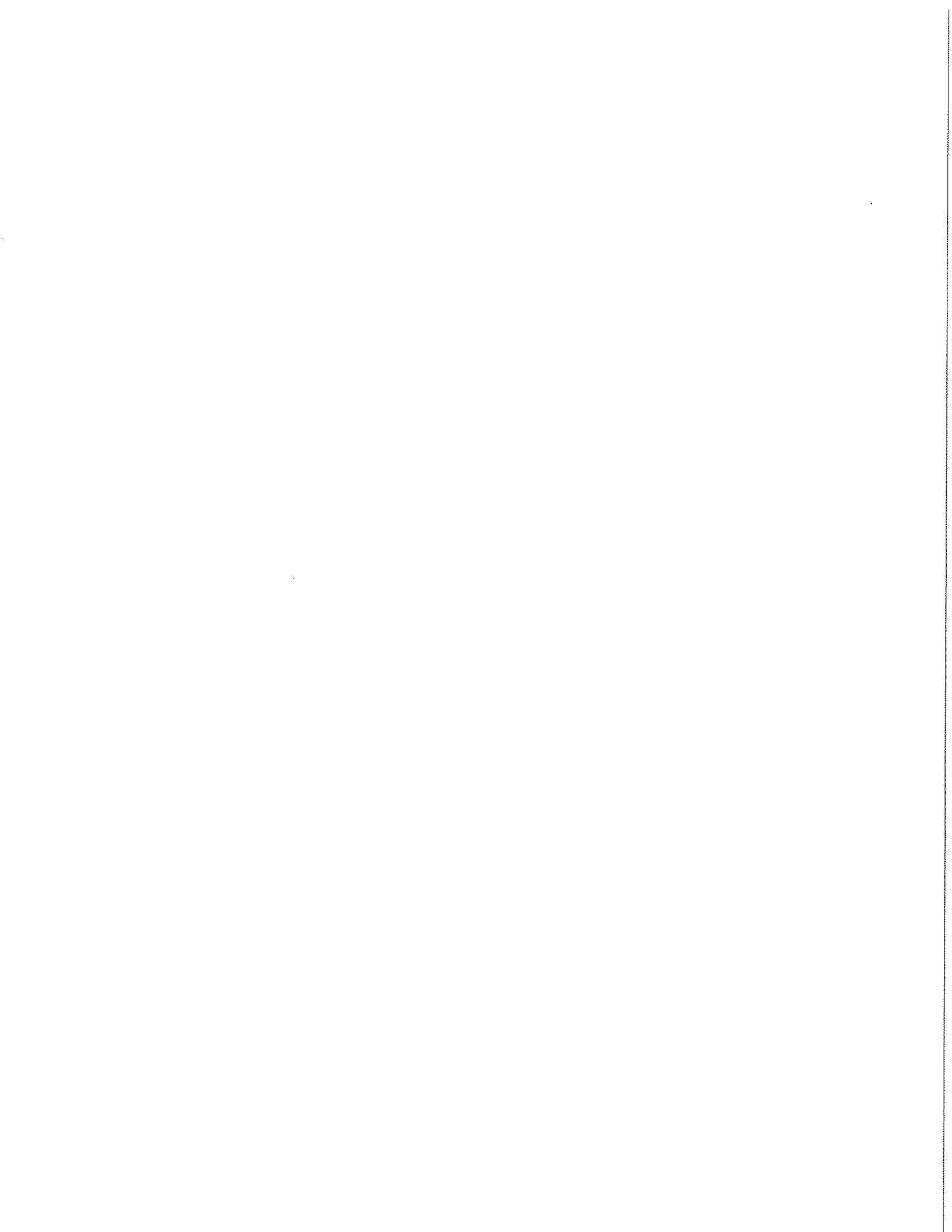
Figure 5 centrifuge trailer set-up inside secondary containment.



2.3 Construction

Equipment set-up (as in figure 4) will consist of the equipment in the listed below; and will take approximately 1week to set-up

- 4-80m³ (500bbl) tanks
- 1-Centrifuge
- 1-Polymer skid
- 1-Solids bins
- 1-Electrical control panel



2.4 Operation

The centrifuge process operation includes the following basic key steps:

1. Coordinate the acceptance and transportation of waste drilling mud from offshore vessels to the Foxtrap facility.
2. Waste drilling mud is transferred into a feed tank to homogenize the mixture and is subsequently pumped into the centrifuge.
3. The resulting separated products will be transported off-site for further treatment and/or disposal.

The hours of operation are scheduled during normal business hours. Extra hours and weekend work may be required depending on the schedule of the supply vessels.

Waste drilling mud will be received into one of the four tanks and directed to the centrifuge using a pump.

The centrifuge will have the ability to mechanically separate oil/ water emulsions from solids into separate and manageable waste streams.

The wastewater generated from the process will be transported to an existing approved facility for further treatment and disposal. Prior to shipment offsite the waste water will be analyzed and profiled to ensure it meets the treatment criteria outlined in the receiving facilities approval.

Recovered oil from the process will be managed in accordance with the existing facility approval (Approval #WMS06-09-015). Oil from the process will be delivered to:

- An approved used oil storage facility
- An approved used oil re-refinery or treatment facility; or
- An approved used oil combustion facility

Solids generated from the process will be transported to Newalta's bioremediation facility in Beech Hill, NS. Treated solids are rigorously tested before re-use as a beneficial product i.e. cover material for landfills, final cover / cap material for landfill that supports plant growth. Historical testing results have proven the treated material to be non-hazardous, non-leachable and non-toxic.

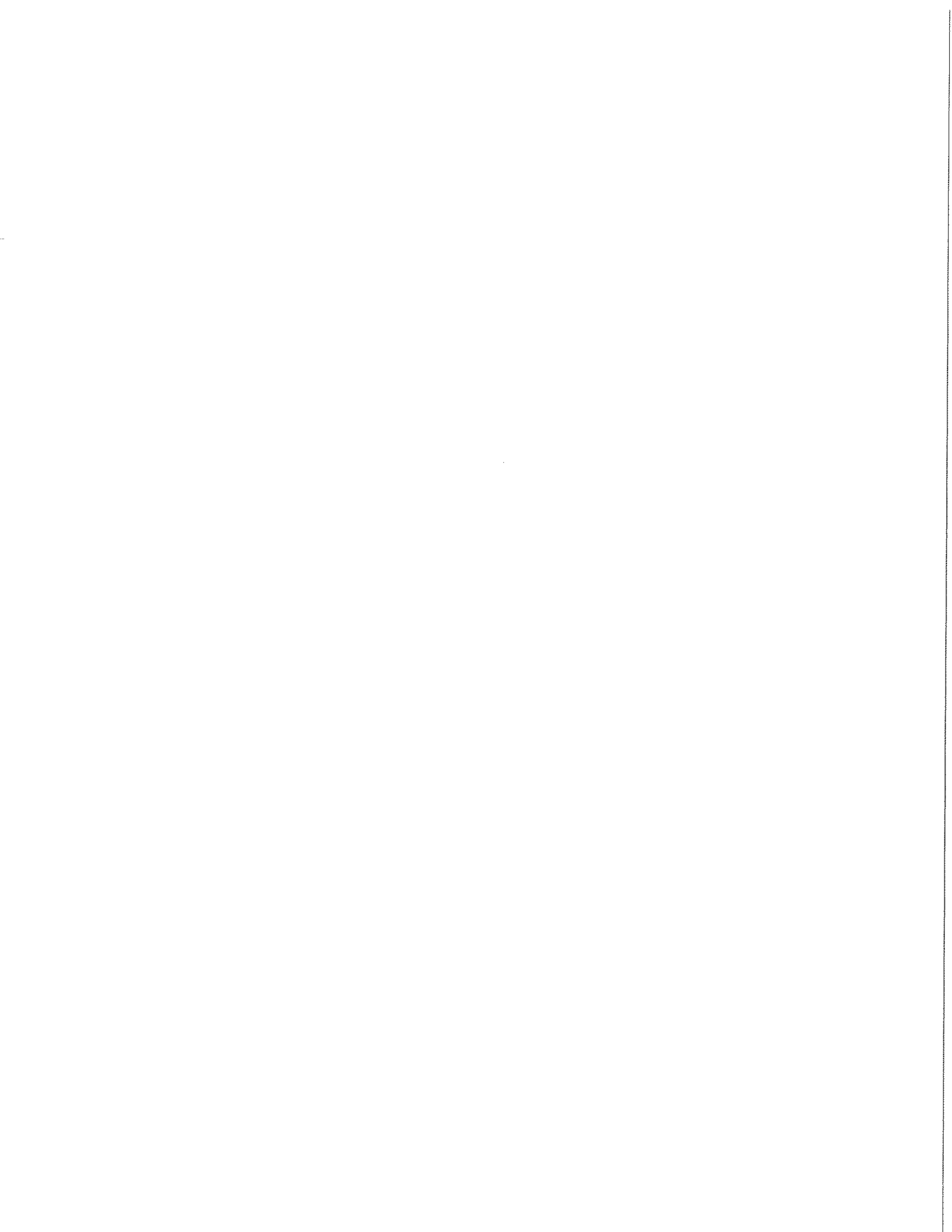
Drilling muds used in the off-shore drilling industry are classified as low-toxicity drilling muds. The drilling muds consist of mineral based oils that have low health and safety risks.

The following contaminants may exist in used off-shore drilling muds:

Sea water picked up from the drilling process

Drill cuttings (small rock particles) picked up during the drilling process

Drilling muds additives. The following is a list of the more significant additives:



- Weighting materials, primarily barite (barium sulfate), may be used to increase the density of the mud in order to equilibrate the pressure between the wellbore and formation when drilling through particularly pressurized zones
- Corrosion inhibitors such as iron oxide, aluminum bisulfate, zinc carbonate, and zinc chromate protect pipes and other metallic components from acidic compounds encountered in the formation.
- Dispersants, break up solid clusters into small particles so they can be carried by the fluid.
- Flocculants, primarily acrylic polymers, cause suspended particles to group together so they can be removed from the fluid at the surface.
- Surfactants, like fatty acids and soaps, defoam and emulsify the mud.
- Biocides, typically organic amines, chlorophenols, or formaldehydes, kill bacteria and help reduce the souring of drilling mud.
- Fluid loss reducers include starch and organic polymers and limit the loss of drilling mud to under-pressurized or high-permeability formations.

Note, the offshore drilling mud is currently handled and transported offsite to the Newalta Beech Hill facility. Historical operations have proven that the solids and water generated off the process meet all regulatory discharge criteria, Recent testing including micro- tox bio assay analyses has been conducted.

During the centrifuge process the waste drilling mud is heated to approximately 70 Degrees Celsius to assist in the separation process. Air emissions are not expected from the process based on historical operations and the characteristics of the material; however we will add a scrubber system to remove odour emission should a problem occur.

Newalta will ensure that all personnel are trained and competent to perform the overall coordination and operation of this additional operation at the Foxtrap facility.

2.5 Occupations

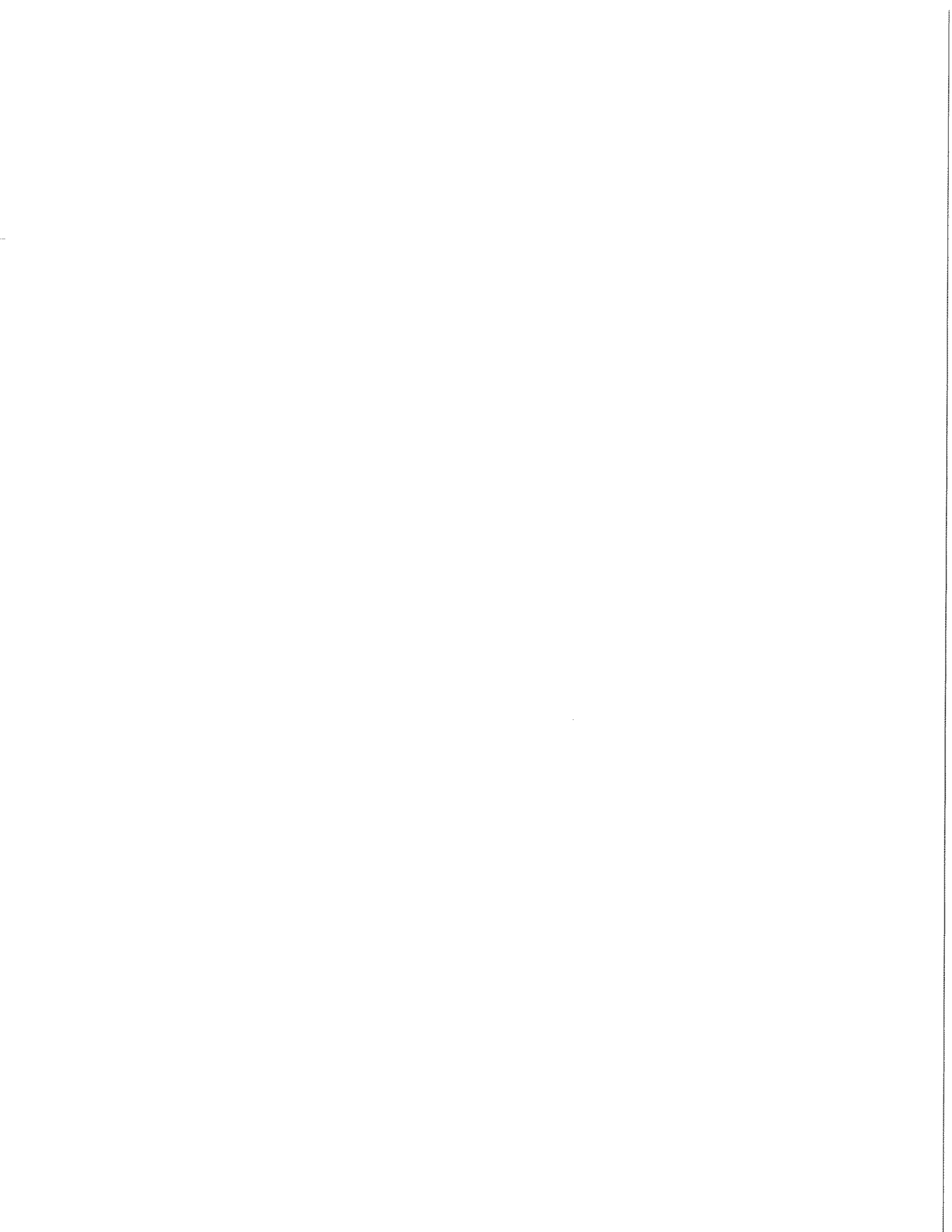
There will be up to 2 new jobs created as a result of this project. These positions are required for initial equipment installation and eventual normal operations. The operation is considered full-time and is expected to continue and provide employment for many years.

Newalta will also be using local contractors and suppliers to support the operation.

A listing of the occupations associated with this undertaking according to the National Occupational Classification 2011 is as follows:

NOC 9212 – Supervisors, petroleum, gas and chemical processing and utilities

NOC 2112 - Chemists



Newalta is committed to an equal opportunity workplace. Equal opportunity means:

- Hiring on merit to attract and maintain a highly qualified workforce
- Removing barriers in employment policies and practices to allow full participation and productivity in all aspects of employment
- Not tolerating discrimination and harassment
- Providing employment accommodation

It is our goal to have a workforce reflective of the population in gender, minorities, and other.

2.1 Project Related Documents

Acquisition Phase 1 completed by JWEL. (see appendix)

3 APPROVAL OF THE UNDERTAKING

Newalta is working with the Department of Environment and Conservation to amend the Foxtrap facility's existing Certificate of Approval to incorporate the operation of this additional centrifuge.

Department contact information is as follows:

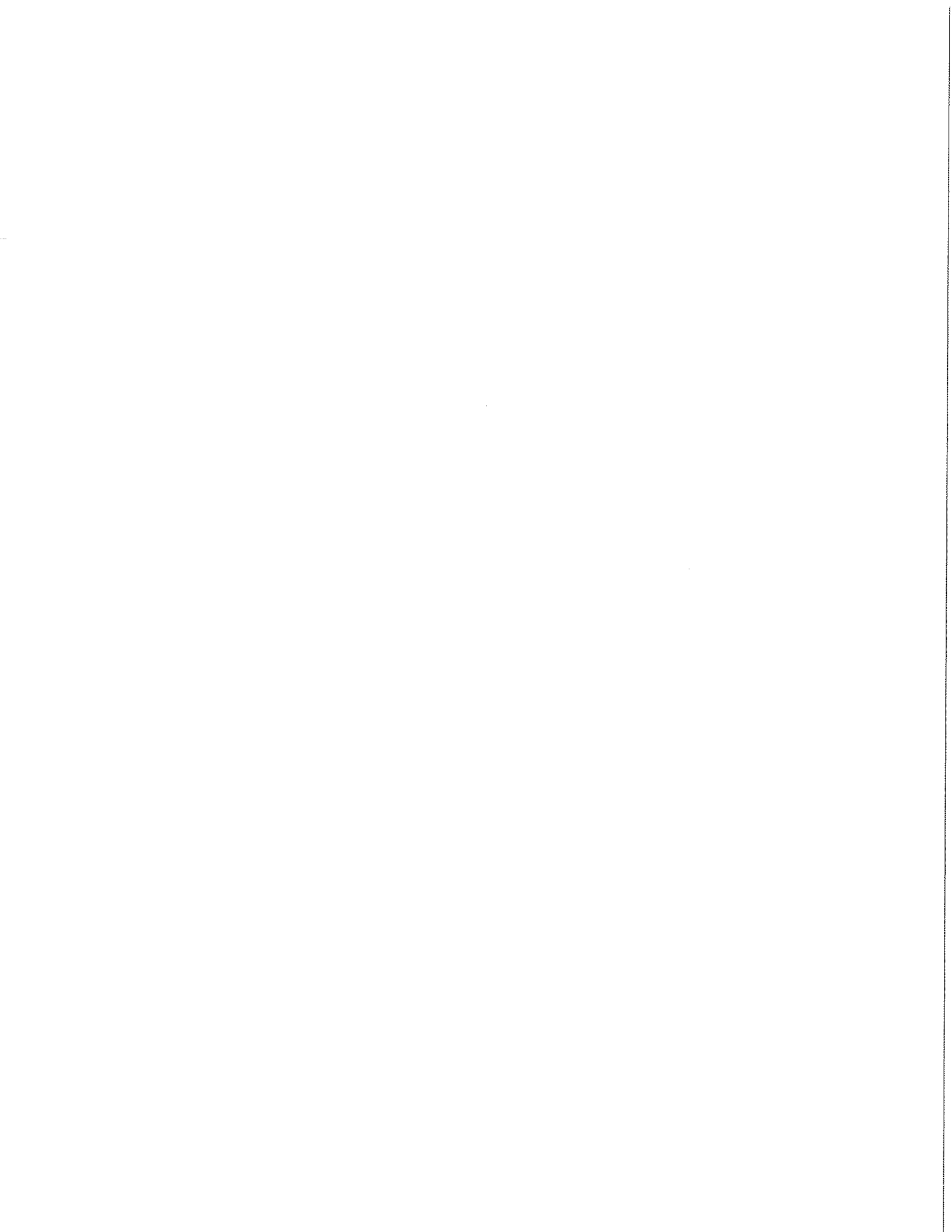
Roman Krska
Environmental Scientist
Pollution Prevention Division
Department of Environment and Conservation
Government of Newfoundland and Labrador

P.O. Box 8700, St. John's, NL, A1B 4J6

4 SCHEDULE

Newalta will be able to commence operation of phase 1 of the Centrifuge process as early as May 1, 2013

This will allow time to obtain the necessary approval and permit for the operations as well as to procure and install phase 1 equipment.



5 FUNDING

The Foxtrap facility centrifuge project will be funded solely by Newalta, and is therefore not dependent upon a grant or loan of capital funds from a government agency.

6 CLOSURE

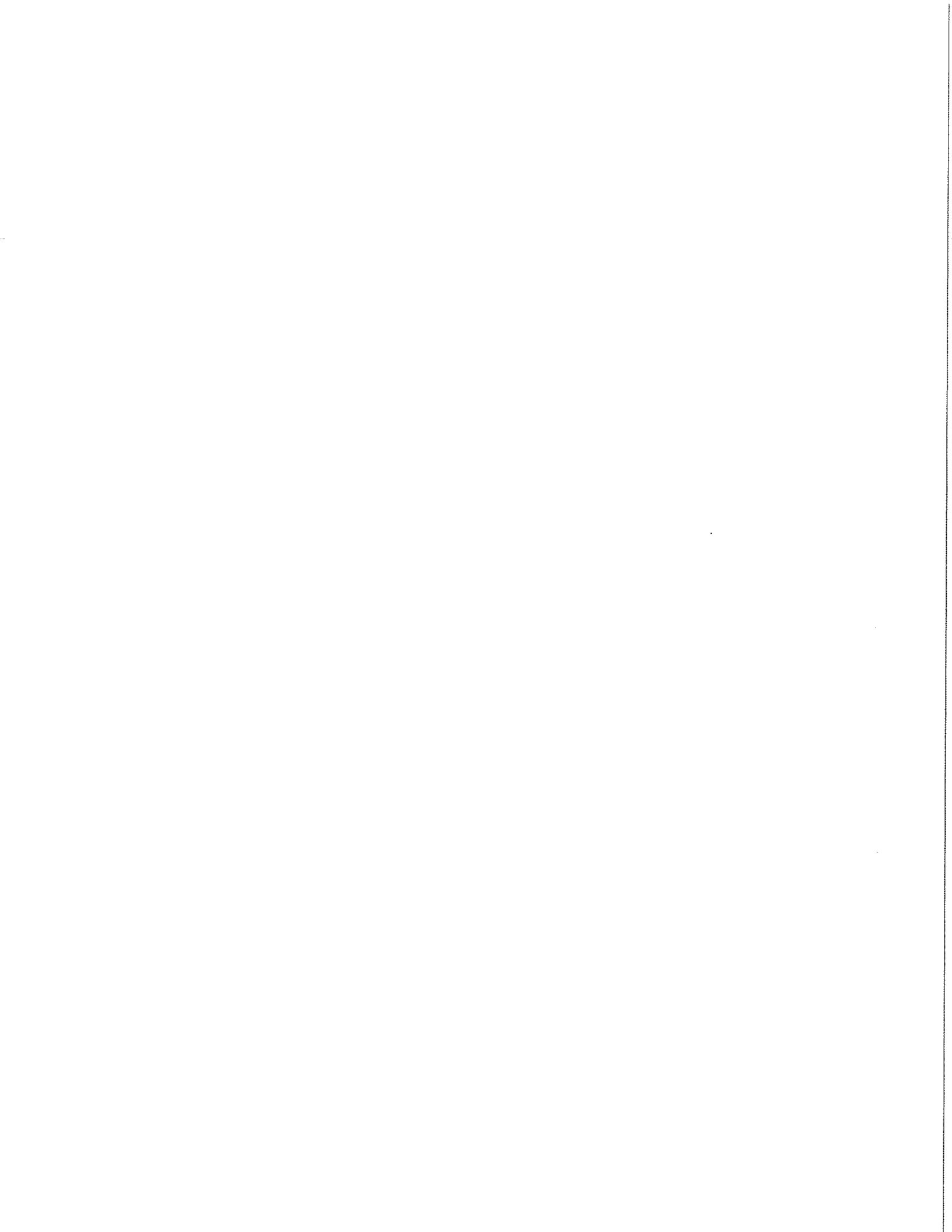
Newalta is committed to ensuring that the Foxtrap facility centrifuge project is managed with the upmost care for the surrounding environment and the employees that operate this equipment.

We are focused on meeting and exceeding the expectations of all parties and committed to the long term viability of the Foxtrap facility operations.

Sincerely,

A handwritten signature in blue ink that reads "Bill Locke". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Bill Locke
Newalta Corporation
Environment, Health and Safety Manger
Ontario and Atlantic Regions



APPENDIX 1

Phase I Environmental Site Assessment



Experts-conseils
Géolo, sciences
et gestion
de l'environnement

Environmental
Engineering
Scientific
Planning
Management
Consultants

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

Bar/Bus: 709.576.1450
Telec/fax: 709.576.2126

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REPORT

Phase I Environmental Site
Assessment

IWM Special Waste Transfer
Facility
349 Incinerator Road, St.
John's, NL
Island Waste Management
Inc. (IWM)

JOB NO. 1016406

Table of Contents

Executive Summary.....	1
Executive Summary.....	2
Site Description and Current Operations.....	2
Environmental Database/Records Review.....	2
Historical Records Review.....	2
Site Visit/Interviews.....	2
Hazardous/Regulated Materials.....	3
Other Environmental Considerations.....	3
Conclusions and Recommendations.....	3
Detail Report.....	4
1.0 General Information.....	5
2.0 Introduction.....	6
2.1 Objectives.....	6
2.2 Scope of Work and Purpose.....	6
2.3 Regulatory Framework.....	7
3.0 Site Description.....	8
3.1 Property Information.....	8
3.2 On-Site Buildings and Structures.....	8
3.3 Physical Setting Sources.....	8
3.3.1 Surficial Geology	8
3.3.2 Surface Water Drainage.....	8
3.3.3 Topography and Regional Drainage.....	9
3.3.4 Bedrock Geology.....	9
4.0 Summary of Records Reviewed.....	10
5.0 Site Visit Findings.....	12
5.1 Current Site Operations.....	12
5.2 Historical Land Use.....	12
5.3 Waste Generation.....	12
5.3.1 Solid and Liquid Wastes.....	12
5.3.2 Drains and Sumps.....	12
5.3.3 Air Discharges and Odours.....	13
5.4 Fuel, Chemical, and Waste Storage.....	13
5.4.1 Underground Storage Tanks (USTs).....	13
5.4.2 Aboveground Storage Tanks (ASTs).....	13
5.4.3 Other Storage Containers.....	13



Table of Contents

5.5 Building Systems/Equipment.....	13
5.5.1 Heating and Cooling Systems.....	13
5.5.2 Hydraulic Equipment.....	13
5.6 Exterior Site Observations.....	14
5.6.1 Surface Features.....	14
5.6.2 Fill Materials.....	14
5.6.3 Wells.....	14
5.7 Hazardous Building Materials.....	14
5.7.1 Asbestos-Containing Materials (ACMs).....	14
5.7.2 Polychlorinated Biphenyls (PCBs).....	15
5.7.3 Lead-Based Materials.....	15
5.7.4 Urea Formaldehyde Foam Insulation (UFFI).....	15
5.7.5 Ozone-Depleting Substances (ODSs).....	16
5.8 Special Attention Items.....	16
5.8.1 Radon Gas.....	16
5.8.2 Microbial Contamination (Mold) and Indoor Air Quality.....	16
5.8.3 Electromagnetic Frequencies (EMFs).....	16
5.8.4 Noise and Vibration.....	17
5.9 Adjoining Property Information.....	17
5.10 Client-Specific Items	18
6.0 Conclusions and Recommendations.....	20
7.0 Closure.....	21
Appendices	
Appendix A Site Plans.....	22
Appendix B Photographs.....	24
Appendix C Assessor Qualifications	33
Appendix D Supporting Documentation.....	37



Executive Summary

JOB NO. 1016406

REPORT TO **Island Waste Management Inc. (IWM)**
137 LeMarchant Road
St. John's, NL
A1C 2H3

FOR **Phase I Environmental Site Assessment**

ON **IWM Special Waste Transfer Facility**
349 Incinerator Road, St. John's, NL

08/23/2006

Jacques Whitford Limited
807 Torbay Road
St. John's, NL
A1A 4Y6

Phone: 709.576.1458
Fax: 709.576.2126

www.jacqueswhitford.com

Executive Summary

Site Description and Current Operations

Jacques Whifford conducted a Phase I Environmental Site Assessment (ESA) of the Island Waste Management Inc. (IWM) Special Waste Transfer Station property located at 349 Incinerator Road in St. John's, NL, herein referred to as the "Site". The Phase I ESA was conducted for IWM in support of environmental due diligence of the Site. The purpose of the Phase I ESA was to assess if evidence of potential or actual environmental contamination exists in connection with the Site, which may be present as a result of current or past activities on the Site or neighbouring properties.

The Site is currently occupied by a special waste transfer facility. The facility consists of a two-storey office and warehouse building, storage trailers (i.e., for new drums and NORM (Naturally Occurring Radioactive Material) wastes), transport trailers, bermed containment area, storage areas (i.e., 1,000 L plastic totes, propane tanks), a general refuse bin, a gravel laydown area and gravel and asphalt paved parking areas. The facility's primary operations include the receipt, handling, temporary storage, bulking and shipment of hazardous and/or controlled wastes for shipment and disposal excluding explosives. The Site covers an area of about 1.5 hectares.

Environmental Database/Records Review

No environmental concerns were identified through the database review to date. A regulatory response from the Newfoundland and Labrador Department of Environment and Conservation (NLDEC) dated August 24, 2006 indicated that they had no information on file pertaining to environmental concerns for the Site. They did have on file a Certificate of Approval dated February 17, 2006 for the operation of the Island Waste Management facility. No regulatory response from the Government Service Centre (GSC) had been received at the time this report was issued. The GSC regulatory response letter will be forwarded to the client upon receipt.

Historical Records Review

Based on the historical information gathered during the Phase I ESA, IWM has operated on the Site since 1996. Prior to this the Site was vacant, undeveloped land with a portion of the Site reportedly used to dry sewage sludge by a local sewage disposal company.

Site Visit/Interviews

The business operations conducted on the Site primarily consist of the handling and temporary storage of hazardous and/or controlled wastes prior to shipment for disposal. These activities are primarily conducted inside the warehouse section of the building. Various wastes are stored at the facility in steel and plastic drums as well as 1,000 L plastic totes for bulking, storage and shipment. All wastes are segregated in the containers according to applicable storage and handling requirements.

NORM contaminated wastes are stored in a designated NORM transport container located on the northwest side of the Site. There are two designated storage trailers for new drums located on the north side of the property adjacent to a storage area for empty 1,000 L plastic totes. At the time of the assessment, there were about ten 20 lb propane tanks stored on the ground surface in a designated propane storage tank area located on the east side of the Site. Non-hazardous solid waste is disposed in a waste bin and removed from the Site by a licensed waste hauler.

Domestic wastewater is discharged to a septic tank and disposal field west of the southwest corner of the building. Three sumps identified on the Site located in the decontamination area, loading dock area and in the containment berm are self-contained and pumped out on an as required basis by a private contractor. It was indicated prior to the Phase I ESA site visit that some equipment possibly contaminated with NORM wastes had recently been cleaned in the containment berm.



Hazardous/Regulated Materials

Based on the age of the Site building, asbestos-containing materials (ACMs), polychlorinated biphenyls (PCBs), lead-based materials and urea formaldehyde foam insulation (UFFI) are not expected to be present.

IWM are permitted to temporarily store ozone-depleting substances as well as asbestos, PCB and lead-containing materials at the waste transfer facility.

Other Environmental Considerations

No other environmental concerns were identified with respect to the Site.

Conclusions and Recommendations

The Phase I ESA has revealed no actual evidence of environmental contamination associated with the Site with the exception of some minor petroleum hydrocarbon stains in the gravel parking/laydown area. As a good environmental practice, stained areas should be removed (where possible). In areas where stains are significant or stained soil cannot be removed, the presence and extent (if any) of subsurface petroleum hydrocarbon impacts can only be confirmed through a subsurface investigation.

Based on the business operations conducted at the Site, potential areas of environmental concern identified during the Phase I ESA included areas where wastes were handled and/or stored including the NORM trailer, containment berm area, plastic tote storage area and shipping/receiving ramp to the warehouse. It was also indicated in a previous environmental report that a small amount of chemical wastes may wash off workers clothes into the shower and discharge into the septic disposal area. In order to confirm the absence or presence of chemicals of concern in soil and/or groundwater in these identified areas, a subsurface investigation including the excavation of test pits, soil sampling and groundwater sampling of existing monitor wells on the Site would be required. A NORM survey would also be required to determine if any radioactive materials have impacted the areas where potential NORM wastes are handled and stored.

Sources of possible ODSs present on the Site are limited to minor quantities of refrigerant present in refrigeration equipment (i.e., refrigerator, water cooler). In addition, based on the operations at the Site, asbestos, PCBs, ODSs and lead containing materials may be temporarily stored at the facility. Suitable precautions and approved contractors should be used for all activities which may disturb hazardous materials.

The statements made in this Executive Summary are subject to the same limitations included in the Closure (Section 7.0) and are to be read in conjunction with the remainder of this report.



Detail Report

1.0 General Information

Client Information:
Island Waste Management Inc. (IWM)
Mr. Patrick Duke
137 LeMarchant Road
St. John's, NL A1C 2H3

Project Information:
Phase I ESA - Island Waste Management Inc. (IWM), St.
John's, NL
1016406

Site Information:
IWM Special Waste Transfer Facility
349 Incinerator Road
St. John's, NL
Site Access Contact: Mr. Patrick Duke

Consultant Information:
Jacques Whitford Limited
607 Torbay Road
St. John's, NL A1A 4Y6

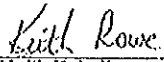
Phone: 709.576.1458 Fax: 709.576.2126
E-mail Address: keith.rowe@jacqueswhitford.com
Site Visit Date: 08/16/2006
Report Date: 08/23/2006
Site Assessor: Roger Biles - Environmental
Technician

Report Prepared By: Keith T.A. Rowe, M.A.Sc., P.Eng. -
Environmental Engineer
Senior Reviewer: Paula Brennan, M.A.Sc., P.Eng. -
Environmental Engineer


Site Assessor:


Roger Biles - Environmental
Technician

Report Prepared By:


Keith T.A. Rowe, M.A.Sc., P.Eng.
- Environmental Engineer

Senior Reviewer:


Paula Brennan, M.A.Sc., P.Eng. -
Environmental Engineer



2.0 Introduction

2.1 Objectives

Jacques Whitford conducted a Phase I Environmental Site Assessment (ESA) of the Island Waste Management Inc. (IWM) Special Waste Transfer Facility property located at 349 Inclinator Road in St. John's, NL, herein referred to as the "Site". The Phase I ESA was conducted for IWM in support of environmental due diligence of the Site. The purpose of the Phase I ESA was to assess if evidence of potential or actual environmental contamination exists in connection with the Site, which may be present as a result of current or past activities on the Site or neighbouring properties.

A site plan is included in Appendix A and selected photographs of the Site are included in Appendix B.

2.2 Scope of Work and Purpose

The Phase I ESA carried out by Jacques Whitford on this property was conducted in general accordance with Jacques Whitford Proposal Number 1016333 dated August 10, 2006 and the Canadian Standards Association's (CSA) Phase I Environmental Site Assessment Standard Z768-01 (updated April 2003) and consisted of the following:

- Records review including, but not limited to, publicly available city directories, aerial photographs, fire insurance plans, geological and topographic maps
- Provincial Government Regulatory Search
- Review of available environmental databases and records
- Review of previous environmental reports and existing title searches, if made available
- Interviews with persons having knowledge of the Site
- A site visit
- Evaluation of information and preparation of the report provided herein

A Phase I ESA does not include sampling or testing of air, soil, groundwater, surface water or building materials. However, a Phase II ESA and NORM (Naturally Occurring Radioactive Material) Survey were requested by IWM to be conducted in conjunction with the Phase I ESA. The results of the Phase II ESA and NORM Survey are presented in a separate report.

This assessment did not include a review or audit of operational environmental compliance issues, or of any environmental management systems, which may exist for the Site.

The assessment of the Site for the potential presence of hazardous building materials was based on the age of the building(s) and components, and a non-intrusive visual review of the Site. No sampling of materials was conducted. A Phase I ESA does not constitute a Hazardous Materials Survey or Designated Substances Survey.

The assessment of the Site for microbial contamination and moisture damage was made during the walk through of the building(s). This assessment was visual only and not every area was assessed. No sampling or intrusive investigation was conducted.

The professional qualifications of the project team are provided in Appendix C.

The Site visit was conducted by Roger Biles of Jacques Whitford, on August 16, 2006. The Site and readily visible and publicly accessible portions of adjoining and neighbouring properties were observed for the presence of potential sources of environmental contamination.

Interviews were carried out to obtain or confirm information on the historic operations and activities on the Site. Mr. Patrick Duke, S.H.E.Q. Advisor with IWM, was interviewed during the course of the Site visit.



2.0 Introduction (continued)

2.3 Regulatory Framework

In Newfoundland and Labrador, the roles and powers of the Newfoundland and Labrador Department of the Environment and Conservation (NLDEC) when dealing with contaminated sites are outlined primarily in the Environmental Protection Act (May 2002). The NLDEC has a mandate to deal with situations where there is an adverse effect, or the likelihood of an adverse effect, associated with the presence or discharge of a contaminant. The purpose of the Guidance Document for the Management of Impacted Sites (2005) is based on a tiered approach to site management. Within this tiered approach, three tiers of increasing technical complexity (Tier I, II and III) are available for the management of impacted sites, all of which provide protection of human health and the environment to achieve the same result of safe site closure. The person responsible, with the assistance of the Site Professional, is able to choose Tier I, II or III depending on the specifics of the site, the contamination, the affected parties and the intended property use after closure. Tier I and II methods result in the selection of contaminant concentrations (clean-up criteria) that are protective of human health and the environment. Tier III may either result in the selection of clean-up criteria or in the implementation of risk management techniques to reduce or eliminate exposure to the identified contaminants. As a result of this tiered approach, the clean-up criteria defined under the new guidance document is not as stringent as the criteria included in the former policy directive PPD97-01 and allows for greater flexibility in dealing with contaminated sites. A Phase I ESA is an initial step in the site assessment process, which may lead to the requirement for restoration work if actual or potential sources of environmental contamination are identified.

A Phase I ESA involves a review of any site buildings for the potential presence of hazardous materials related to building components and materials. Specific federal or provincial regulations, guidelines or codes of practice exist for these individual hazardous materials. Where required, this documentation was utilized to determine appropriate conclusions and formulate appropriate recommendations.



3.0 Site Description

3.1 Property Information

The Site is located at 349 Incinerator Road off the Foxtrap Access Road (Route 61) in the municipality of St. John's, NL. At the time of the assessment, the Site was occupied by a special waste transfer facility operated by IWM. The Site covers an area of about 1.5 hectares.

Current Site Owner: Island Waste Management Inc. (IWM)
Legal Description: None available
Property Area: About 1.5 hectares

Utility Providers:
Electric: Newfoundland Power
Gas: Not Applicable
Water: Private
Storm and Sanitary Sewers: Private

3.2 On-Site Buildings and Structures

The Site is currently occupied by a two-storey building on the southeast side of the property consisting of separate office and waste storage and handling areas. In addition, there are transport and storage containers located on the Site including a new drum storage trailer on the north side of the Site and a NORM trailer on the northwest side of the Site. The NORM trailer contains NORM wastes (i.e., drilling muds) stored in drums and plastic pails collected from the offshore oil and gas industry. The following is a summary of the main site building information.

Building ID: Office/Waste Transfer Facility Building
No. of Levels: 2
Basement: No
Area: 360 m²
Year Built: 1996
Building Use: Two-storey office area/waste storage and handling warehouse area.
General Construction: Concrete slab on grade building, steel deck roof, concrete block walls, metal siding. The concrete foundation of the waste transfer building is lined with a geosynthetic membrane.

3.3 Physical Setting Sources

3.3.1 Surficial Geology

Based on available surficial geology maps, the native surficial soils at the Site likely consist of glacial deposits, principally comprised of sand and gravel till overlying sedimentary bedrock. The characteristic permeability of sand and gravel till is low. A site-specific determination would be required in order to obtain detailed soil profile and permeability information.

3.3.2 Surface Water Drainage

The surfaces of the Site consist of asphalt paved and gravel surface areas. It is assumed stormwater drains by infiltration and/or overland flow. Stormwater in the bermed containment area would be expected to drain to a sump located in this area.



3.0 Site Description (continued)

3.3 Physical Setting Sources (continued)

3.3.3 Topography and Regional Drainage

The topography of the Site is generally level with the land on the north property boundary sloping downwards in that direction.

Based on "Geological Survey of Canada" Topographic Map 1N/10, the observed site topography and previous environmental investigations, regional surface drainage (anticipated groundwater flow direction) appears to be to the north-northwest.

It should be noted that the direction of the shallow groundwater flow in limited areas can also be influenced by the presence of underground utility corridors and is not necessarily a reflection of regional or local groundwater flow or a replica of the Site or area topography.

3.3.4 Bedrock Geology

Based on an available bedrock geology map, bedrock in the area of the Site consists of granite (granitoid suites) of the Late Proterozoic to Cambrian era.



4.0 Summary of Records Reviewed

The applicable search distance for the records review included the Site, properties immediately adjoining the Site and other neighbouring properties where activities considered to be potential sources of environmental contamination were apparent. Information sources obtained and reviewed as part of the records review are listed below.

Any previous environmental reports provided to Jacques Whitford are listed below and were reviewed as a source of background information. Relevant information from these previous environmental reports is summarized in various sections of this report.

Available environmental databases and records were searched to determine if the Site, adjacent or neighboring properties are listed. The databases and search results are presented throughout this report. Applicable federal, provincial and municipal regulations were reviewed to identify regulated and/or objective thresholds or contaminant parameters against which potential or actual environmental concerns at the Site were assessed. Where required, these documents were utilized to determine appropriate conclusions and formulate appropriate recommendations and are outlined in the respective subsections within this report.

Jacques Whitford Limited requested the Newfoundland and Labrador Department of Environment and Conservation (NLDEC) and Government Service Centre (GSC), Department of Government Services, Government of Newfoundland and Labrador to review their records for the Site and adjacent properties and advise Jacques Whitford in writing on the following:

- permits (e.g., certificates of approval, storage tank registrations, and/or operating permits) that pertain to activities that may impact the condition of the property (e.g., hazardous waste storage, treatment, and disposal or potential sources of information);
- past, pending, outstanding or continuing prosecutions, work orders, or control orders, or complaints related to environmental compliance that may impact the condition of the property; and,
- violations of environmental statutes, regulations, by-laws, approvals and permits that may impact the condition of the property.

A regulatory response from the Newfoundland and Labrador Department of Environment and Conservation (NLDEC) dated August 24, 2006 indicated that they had no information on file pertaining to environmental concerns for the Site. They did have on file a Certificate of Approval dated February 17, 2006 for the operation of the Island Waste Management facility. No regulatory response from the Government Service Centre (GSC) had been received at the time this report was issued. The GSC regulatory response letter will be forwarded to the client upon receipt.

SOURCE	INFORMATION/CONTACT
Aerial Photographs	2001, 1995, 1986, 1978, 1973, 1966
Fire Insurance Plans	None available
City Directories	City of St. John's Archives
Previous Environmental Reports	- JW Project No. 84162, Environmental Survey, Special Waste Transfer Station, Incinerator Road, St. John's, NL dated March 8, 1996 - JW Project No. 85402, Environmental Inspection, Island Waste Management Inc., Solid Waste Management Transfer Station, St. John's, NL dated June 23, 1998 - JW Project No. 85792, Phase II Environmental Site Assessment, Special Waste Management Facility,



4.0 Summary of Records Reviewed (continued)

SOURCE	INFORMATION/CONTACT
Previous Environmental Reports	Incinerator Road, Foxtrap, NL dated March 24, 1999 - Phase I Environmental Assessment, IWM Special Waste Transfer Station, Foxtrap, NL dated July 21, 2004 - JW Project No. 10505, Phase I ESA -- Island Waste Management (IWM) Special Waste Transfer Station, Foxtrap, NL Verification Letter to Royal Bank of Canada dated August 25, 2004
Company Records	Phase I Environmental Site Assessment, IWM Special Waste Transfer Station, Foxtrap, NL dated July 21, 2004
Geological and Geotechnical Reports	Government of Newfoundland and Labrador, Online Access to Maps and Reports of the Geoscience Resources of Newfoundland and Labrador, Mineral Resource Atlas: http://gis.geosurv.gov.nl.ca/
Other Available Information	NLDEC regulatory request letter dated August 10, 2006; GSC regulatory request letter dated August 10, 2006; NLDEC regulatory response letter dated August 24, 2006. Copies of letters are included in Appendix D.



5.0 Site Visit Findings

5.1 Current Site Operations

The Site is currently occupied by a special waste transfer facility. The facility consists of a two-storey office and warehouse building, storage trailers (i.e., for new drums and NORM (Naturally Occurring Radioactive Material) wastes), transport trailers, bermed containment area, storage areas (i.e., 1,000 L plastic totes, propane tanks), general refuse bin, gravel laydown area and gravel and asphalt paved parking areas. The facility's primary operations include the receipt, handling, temporary storage, bulking and shipment of hazardous and/or controlled wastes for shipment and disposal excluding explosives.

5.2 Historical Land Use

Historical land use for the Site was determined through historical records listed in Section 4.0. A summary of the historical information is presented below.

Period/Date: 1996 to Present

Land Use: Island Waste Management Inc. Special Waste Transfer Facility

Period/Date: Prior to 1996

Land Use: Undeveloped, vacant land and portion of Site reportedly used to dry sewage sludge by a local sewage disposal company.

5.3 Waste Generation

5.3.1 Solid and Liquid Wastes

No wastewater discharges other than domestic wastewater were identified to be produced on the Site at the time of the site visit. Domestic wastewater is discharged to a septic tank and disposal field west of the southwest corner of the building. It was reported in a previous environmental report (JW Report No. 85402 dated June 23, 1998) that on-site showers discharge to the septic disposal area and there existed the possibility that various potential chemicals on workers clothes could be washed off in the showers and discharged into the septic disposal area.

Three sumps identified on the Site located in the decontamination area, loading dock area and in the containment berm are self-contained and pumped out on an as required basis by a private contractor. It was indicated prior to the Phase I ESA site visit that some equipment possibly contaminated with NORM wastes had recently been cleaned in the containment berm.

The business operations conducted on the Site primarily consist of the handling and temporary storage of hazardous and/or controlled wastes prior to shipment for disposal. These activities are primarily conducted inside the warehouse section of the building. NORM contaminated wastes are stored in a designated NORM transport container located on the northwest side of the Site. No issues were identified with the storage of these materials during the Site visit.

Non-hazardous solid waste is disposed in a waste bin and removed from the Site by a licensed waste hauler.

5.3.2 Drains and Sumps

No floor drains are present in the building on Site. As previously indicated, the three sumps on the Site located in the decontamination area, loading dock area and in the containment berm, are self-contained and pumped out on an as required basis by a private contractor. No issues were identified with the sumps on Site at the time of the site visit. The integrity of the sumps is regularly checked by IWM personnel as part of IWM's Quality and



5.0 Site Visit Findings (continued)

5.3 Waste Generation (continued)

5.3.2 Drains and Sumps (continued)

Environmental Management System.

5.3.3 Air Discharges and Odours

The facility uses an air-purifying general ventilation system and an activated carbon filtering system for the bulking room in the warehouse section of the building. A fume hood is also present in the warehouse where testing of chemicals is conducted. A gas monitoring system is also present in the building. Air emissions are not suspected to result in residual contamination to the property based on the systems currently present. No significant odours were identified during the course of the site visit.

5.4 Fuel, Chemical, and Waste Storage

5.4.1 Underground Storage Tanks (USTs)

No chemical or fuel storage USTs were identified to be present on the Site. Further, no vent or fill pipes indicating the potential presence of an abandoned or decommissioned UST were observed.

5.4.2 Aboveground Storage Tanks (ASTs)

One 22,730 steel AST is located on the Site adjacent to the tote storage area. It was reported by IWM that this tank was not used. No issues regarding this tank were identified during the current assessment.

5.4.3 Other Storage Containers

Various wastes are stored at the facility in steel and plastic drums as well as 1,000 L plastic totes for bulking, storage and shipment. All wastes are segregated in the containers according to applicable storage and handling requirements.

There are two designated storage trailers for new drums located on the north side of the property adjacent to a storage area for empty 1,000 L plastic totes. At the time of the assessment, there were about ten 20 lb propane tanks stored on the ground surface in a designated propane storage tank area located on the east side of the Site.

5.5 Building Systems/Equipment

5.5.1 Heating and Cooling Systems

The Site building is provided with heating by electric heat. No air-conditioning system is present in the building.

5.5.2 Hydraulic Equipment

The only piece of hydraulic equipment identified on the Site is a forklift that operates in the storage facility. No other hydraulic equipment operates on the Site. No issues concerning hydraulic equipment were identified.



5.0 Site Visit Findings (continued)

5.6 Exterior Site Observations

5.6.1 Surface Features

Some minor petroleum hydrocarbon surficial staining was observed in the gravel area of the Site most likely from parked vehicles. No other stained surficial materials or stressed vegetation was observed on the Site. A small stream is located west of the Site that passes under an access road to the property. No other watercourses, lagoons or ditches were identified to be present on the Site.

5.6.2 Fill Materials

Fill material was reportedly used on the Site during initial site development. Fill material was also encountered during the excavation of test pits during a previous subsurface investigation.

5.6.3 Wells

An artesian water well is located southeast of the site building. However, IWM indicated that this well is not used for drinking water. In addition, there are five groundwater monitoring wells located on the Site that were installed as part of previous subsurface investigations. These wells were to be sampled as part of the Phase II ESA. No other abandoned or existing wells (water, oil, gas or disposal) were identified to be present on the Site.

5.7 Hazardous Building Materials

5.7.1 Asbestos-Containing Materials (ACMs)

The inhalation of asbestos fibres can cause serious diseases of the lungs and other organs that may not appear until years after the exposure has occurred.

The common use of friable asbestos-containing materials (ACMs) in construction generally ceased voluntarily in the mid 1970s. The exception to this is vermiculite. Vermiculite is a naturally occurring clay mineral which has been used in residential and commercial buildings as insulation and as an additive in a variety of building products. In March 2004, Health Canada issued a bulletin noting the potential contamination of vermiculite with asbestos and thus an increased risk of releasing asbestos fibres with its disturbance. Due to the extremely high potential for fibre release during disturbance and the non-homogeneous nature of vermiculite, any vermiculite or product that contains vermiculite should be considered as suspect asbestos until sampled following approved methodology. If sampling indicates that asbestos is present in any concentration the product be considered as asbestos-containing and dealt with accordingly. In addition, other ACMs are still known to be present in non-friable building materials currently used in the construction of buildings.

Friable ACMs (crumbles easily by hand pressure) are a potential health concern as asbestos fibres can be easily exposed and become airborne. Further, non-friable ACMs can be considered friable if disturbed. However, if identified to be present, friable ACMs can remain in a building provided that they are in good condition or encapsulated, and a management plan is implemented. If friable asbestos is present in a supply or return air plenum it should be removed. The investigation and management of asbestos-containing materials is governed by provincial regulations.

Based on the age of the site building, friable ACMs are not expected to be present.

As part of site operations at the waste transfer facility, IWM are permitted to temporarily store ACMs.



6.0 Site Visit Findings (continued)

6.7 Hazardous Building Materials (continued)

6.7.2 Polychlorinated Biphenyls (PCBs)

From the 1930s to the 1970s, PCBs were widely used in a number of industrial materials, including sealing and caulking compounds, inks and paint additives. They were also used to make coolants and lubricants for certain kinds of electrical equipment, including transformers and capacitors. PCBs are an environmental concern as they do not readily degrade and have been identified to bioaccumulate. In Canada, the federal Environmental Contaminants Act (1976), prohibited the use of PCBs in heat transfer and electrical equipment installed after September 1, 1977, and in transformers and capacitors installed after July 1, 1980. In addition, the storage and disposal of PCB waste materials is regulated.

The site building utilizes fluorescent light fixtures. However, PCB-containing ballasts are not expected to be present based on the age of the building.

An oil-filled, pole-mounted transformer owned by Newfoundland Power was observed to be present to the northwest of the waste transfer building. A yellow sticker is present on the transformer indicating that it contains less than 50 ppm PCBs (non PCB).

As part of site operations at the waste transfer facility, IWM are permitted to temporarily store PCB containing materials. At the time of the assessment, possible PCB-containing transformers were observed in the warehouse.

6.7.3 Lead-Based Materials

In 1976, the lead content in interior paint was limited to 0.5% by weight under the federal Hazardous Products Act. All consumer paints produced and imported into Canada are virtually lead free as of 1991. In 2005 production of surface coating products was limited when dry to 0.06% lead, however lead based paint remains defined as 0.5% lead. Exception to the 0.06% lead are permitted in certain circumstances but must be clearly labelled in accordance with the legislation. Lead is also associated with plumbing solder and old pipes. Lead based water supply pipes were used more than 50 years ago. Between 1930 and 1986, most buildings used copper pipe with lead-solder joints. In Canada the use of lead in solder, faucets, piping and pipe fittings has been limited. Manufacturers were permitted to sell their existing stock into the late 1980s. Other lead-based products include wall shielding (x-ray rooms). Lead occurs naturally in the environment and has many industrial uses. Lead, particularly lead dust, can be hazardous to human health depending on the amount and type of exposure.

Based on the age of the site building, it is unlikely that lead-based products are present in building materials. As part of site operations at the waste transfer facility, IWM are permitted to temporarily store lead-based products.

6.7.4 Urea Formaldehyde Foam Insulation (UFFI)

During the 1970s, when concerns over energy efficiency led to efforts to improve home insulation in Canada, UFFI became an insulation product for existing houses. Most installations occurred between 1977 and its ban in Canada in 1980 under the federal Hazardous Products Act. In the insulation process, a slight excess of formaldehyde was often added to ensure complete "curing" with the urea to produce the urea-formaldehyde foam. This excess was given off during the curing, almost entirely within a day or two of injection. UFFI can begin to deteriorate if exposed to water and moisture. This will also result in formaldehyde gas emission.

Based on the age of the site building, it is unlikely that UFFI may be present on the Site. No evidence of the application of UFFI was observed during the site visit.



5.0 Site Visit Findings (continued)

5.7 Hazardous Building Materials (continued)

5.7.5 Ozone-Depleting Substances (ODSs)

In 1998, the federal government filed the Ozone-depleting Substances Regulations. The Regulations combine and replace the Ozone-depleting Substances Regulations (SOR/95-576), the Ozone-depleting Substances Products Regulations (SOR/95-584) and the Chlorofluorocarbon Regulations, 1989 (SOR/90-127).

The Regulations reflect Canada's commitment to meet its requirements under the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol). The Montreal Protocol is an international agreement signed by over 180 countries to control the production and exchange of certain ozone-depleting substances. The Regulations are intended to further reduce emissions of ozone-depleting substances. These regulations were amended in 2001, 2002, and 2004.

Sources of possible ODSs present on the Site are limited to minor quantities of refrigerant present in refrigeration equipment (i.e., household refrigerator, water cooler). As part of site operations at the waste transfer facility, IWM are permitted to temporarily store ODSs.

5.8 Special Attention Items

5.8.1 Radon Gas

Radon gas is a product of the decay series that begins with uranium. Radon is produced directly from radium which is an intermediary in the radioactive decay series. Radon is found to be associated with uranium rich black shale and/or granite bedrock. Radon emits alpha particles and produces several solid radioactive products called radon daughters. Harmful levels of radon and radon daughters can accumulate in confined air spaces, such as basements and crawl spaces.

No testing for radon gas products has reportedly been completed for the Site. Further, no information regarding radon testing in the area of the Site was available from the Province of Newfoundland and Labrador. Based on the geology of the area, radon gas accumulation is not expected to be an issue at the Site.

5.8.2 Microbial Contamination (Mold) and Indoor Air Quality

The growth of mold in indoor environments is typically due to a moisture problem related to building envelope or mechanical system deficiencies or design, and can produce adverse health effects. There is no practical way to eliminate all mold and mold spores in the indoor environment. The way to control mold is to control moisture.

No visual evidence of suspected mold growth was observed in the accessed areas of the site building at the time of the site visit.

5.8.3 Electromagnetic Frequencies (EMFs)

Electrical currents induce electromagnetic fields. Common household current is alternating current, which reverses its direction (its charge) then switches back. This cycle creates electric and magnetic fields at the same frequency. No scientific data supports definitive answers to questions about the existence or non-existence of health risks related to electromagnetic fields.

No high-voltage transmission lines or electrical substations, which could generate significant electromagnetic fields, were identified on or adjacent to the Site.



5.0 Site Visit Findings (continued)

5.8 Special Attention Items (continued)

5.8.4 Noise and Vibration

The effects of noise and vibration on human health vary according to the susceptibility of the individual exposed, the nature of the noise/vibration and whether exposure occurs in the working environment or in the home.

No major or persistent sources of noise and vibration were identified to be present on the Site at the time of the site visit.

5.9 Adjoining Property Information

The current activities on neighbouring properties observed at the time of the site visit and a summary of historic information gathered through the records review are presented in the following sections.

DIRECTION FROM SITE: East

Occupant(s) Name:	Vacant Land/Former Landfill Site
Address:	Incinerator Road
Relation To Property:	Neighbouring
Current Use:	Commercial

Potential Environmental Concerns:

Vacant land followed by a former landfill site is located east of the subject Site. The landfill, including a former teepee incinerator, was reportedly decommissioned in 1998. This property is located about 200 m down-gradient of the subject Site to the east-northeast. No evidence of actual or potential environmental impacts from this property was observed during the site reconnaissance. No current activities, operations or tenants on this property were identified that would be considered a potential environmental concern to the subject Site.

Historical Activities:

Due to the former operations of a teepee incinerator on the landfill property, there existed the potential for airborne pollutants to migrate onto the subject Site. A previous subsurface investigation conducted on the subject Site (JW Project No. 85792, Phase II Environmental Site Assessment, Special Waste Management Facility, Incinerator Road, Foxtrap, March, 1999), reported elevated levels of total dioxins/furans in soil from a test pit excavated on the subject Site. These elevated levels of total dioxins/furans were most likely attributed to emissions from the former teepee incinerator.

No other historic activities, operations or tenants on the property to the east were identified that would be considered a potential environmental concern to the subject Site.

DIRECTION FROM SITE: North

Occupant(s) Name:	Vacant Land/Incinerator Road/Rendering Plant
Address:	Incinerator Road
Relation To Property:	Neighbouring
Current Use:	Commercial
Across What:	Incinerator Road

Potential Environmental Concerns:

Vacant land and Incinerator Road are located north of the Site. Further north is a rendering plant that recycles animal and poultry by-products including bones, trim, fat, offal and feathers. This property is located about 500



5.0 Site Visit Findings (continued)

5.9 Adjoining Property Information (continued)

DIRECTION FROM SITE: North continued

Potential Environmental Concerns:

m down-gradient of the subject Site to the north. No evidence of actual or other potential environmental impacts from this property was observed during the site reconnaissance with the exception of possible of minor odour issues depending on wind direction. No other current activities, operations or tenants on this property were identified that would be considered a potential environmental concern to the subject Site.

Historical Activities:

No historic activities, operations or tenants on the property to the north were identified that would be considered a potential environmental concern to the subject Site.

DIRECTION FROM SITE: South

Occupant(s) Name:	Rock Quarry
Address:	Incinerator Road
Relation To Property:	Neighbouring
Current Use:	Commercial
Across What:	Vacant land

Potential Environmental Concerns:

The properties neighbouring to the south side of the subject Site are occupied by vacant land followed by a rock quarry about 500 m from the Site. Based on the area topography and the expected direction of groundwater flow towards the north-northwest, the properties to the south are expected to be hydraulically up-gradient of the subject Site. No evidence of actual or potential environmental impacts from these properties was observed during the site reconnaissance. No other current activities, operations or tenants on these properties were identified that would be considered a potential environmental concern to the subject Site.

Historical Activities:

No historic activities, operations or tenants on the property to the south were identified that would be considered a potential environmental concern to the subject Site.

DIRECTION FROM SITE: West

Occupant(s) Name:	Not Applicable
Address:	Incinerator Road
Relation To Property:	Adjoining
Current Use:	Undeveloped

Potential Environmental Concerns:

Vacant, undeveloped land and Incinerator Road is located to the west of the Site. No potential concerns were identified that would be considered a potential environmental concern to the subject Site.

Historical Activities:

No historic activities, operations or tenants on the property to the west were identified that would be considered a potential environmental concern to the subject Site.

5.10 Client-Specific Items

The client requested that a Phase II ESA and NORM survey be conducted in conjunction with the Phase I ESA. The results of the Phase II ESA and NORM Survey are presented in a separate report. No other specific client



5.0 Site Visit Findings (continued)

5.10 Client-Specific Items (continued)

requests were made with respect to this Phase I ESA.



6.0 Conclusions and Recommendations

The Phase I ESA has revealed no actual evidence of environmental contamination associated with the Site with the exception of some minor petroleum hydrocarbon stains in the gravel parking/laydown area. As a good environmental practice, stained areas should be removed (where possible). In areas where stains are significant or stained soil cannot be removed, the presence and extent (if any) of subsurface petroleum hydrocarbon impacts can only be confirmed through a subsurface investigation.

Based on the business operations conducted at the Site, potential areas of environmental concern identified during the Phase I ESA included areas where wastes were handled and/or stored including the NORM trailer, containment berm area, plastic tote storage area and shipping/receiving ramp to the warehouse. It was also indicated in a previous environmental report that a small amount of chemical wastes may wash off workers clothes into the shower and discharge into the septic disposal area. In order to confirm the absence or presence of chemicals of concern in soil and/or groundwater in these identified areas, a subsurface investigation including the excavation of test pits, soil sampling and groundwater sampling of existing monitor wells on the Site would be required. A NORM survey would also be required to determine if any radioactive materials have impacted the areas where potential NORM wastes are handled and stored.

Sources of possible ODSs present on the Site are limited to minor quantities of refrigerant present in refrigeration equipment (i.e., refrigerator, water cooler). In addition, based on the operations at the Site, asbestos, PCBs, ODSs and lead containing materials may be temporarily stored at the facility. Suitable precautions and approved contractors should be used for all activities which may disturb hazardous materials.



7.0 Closure

This report has been prepared for the sole benefit of Island Waste Management Inc. The report may not be used by any other person or entity without the express written consent of Island Waste Management Inc. and Jacques Whitford. All parties are subject to the same limit of liability as agreed to in the Jacques Whitford Limited Standard Terms and Conditions. Any use which a third party makes of this report, or any reliance on decisions made based on it, are the responsibility of such third parties. Jacques Whitford 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 and interviews. Although attempts were made, whenever possible, to obtain a minimum of two confirmatory sources of information, Jacques Whitford 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 Jacques Whitford based on the data obtained during the assessment. Due to the nature of assessment and the limited data available, Jacques Whitford cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be construed as legal advice.

Since the purpose of a Phase I ESA is to identify evidence of potential or actual contamination, the identification of site conditions which may pose a non-environmental risk to buildings or people on the Site is beyond the scope of this assessment. (Examples include but are not limited to underground mine workings, volcanic or earthquake activities, severe weather, and/or flood plains in the area.) Jacques Whitford accepts no responsibility for damages, if any, suffered as a result of any non-environmental risk.

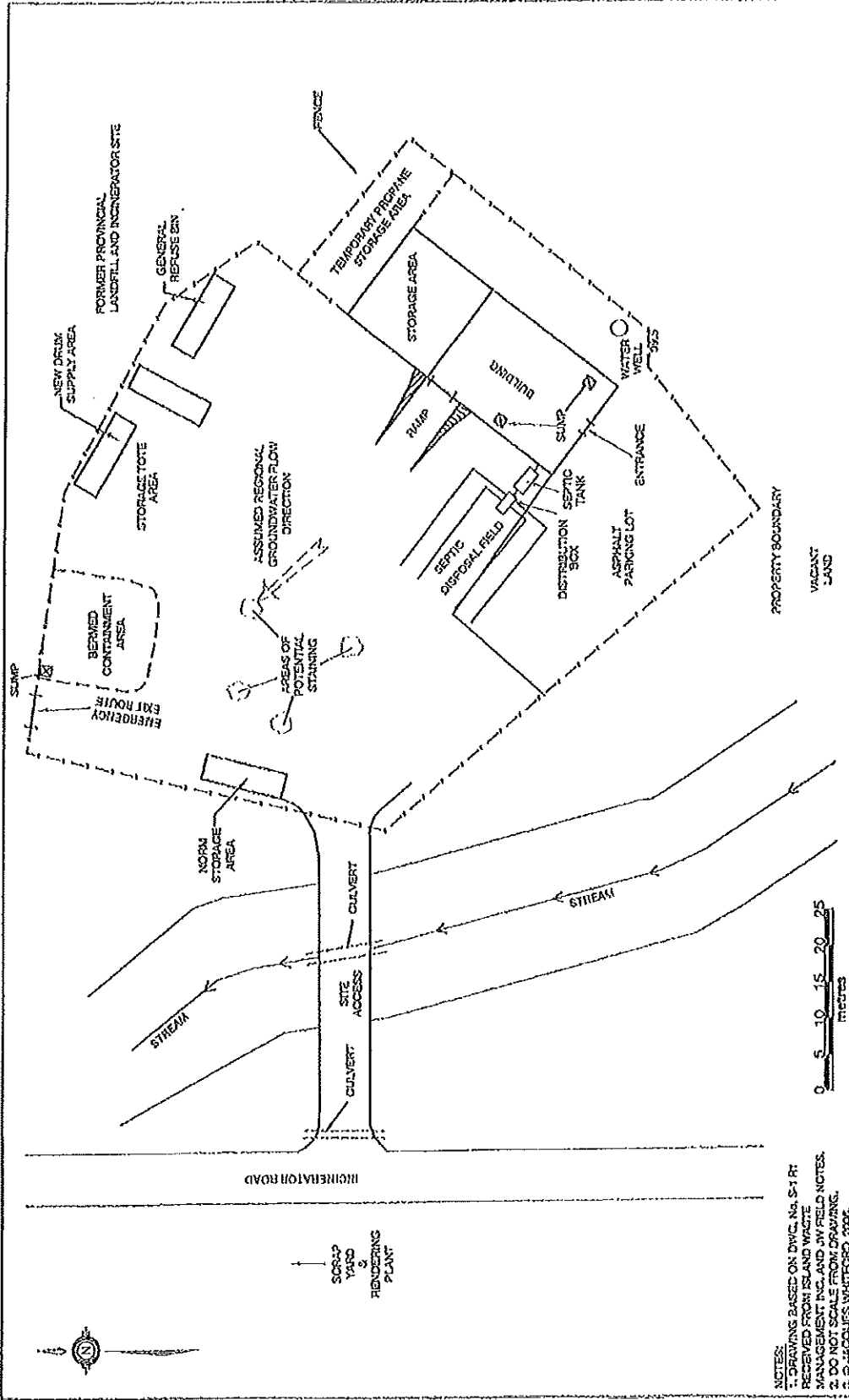
Should additional information become available which differs significantly from our understanding of conditions presented in this report, we request that this information be brought to our attention so that we may reassess the conclusions provided herein.

This report was prepared by Keith Rowe, M.A.Sc., P.Eng. and reviewed by Paula Brennan, M.A.Sc., P.Eng.



Appendix A

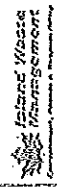
Site Plans



		DATE: AUG. 27, 2006
AS SHOWN	PROJECT	PROJECT NO.
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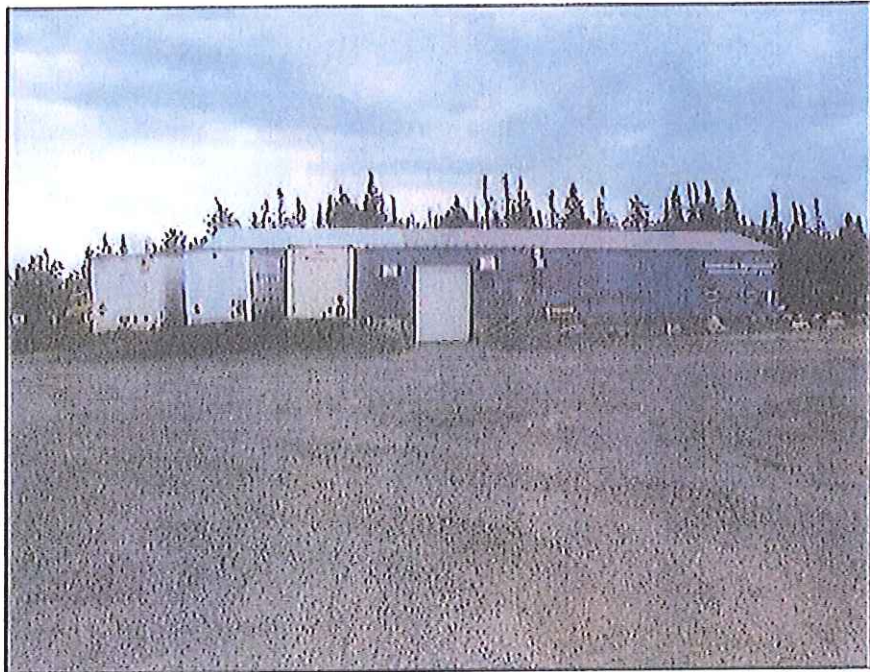
ISLAND WASTE MANAGEMENT INC.
 PHASE I ENVIRONMENT SITE ASSESSMENT
 SPECIAL WASTE MANAGEMENT FACILITY, ST. JOHNS, NL
 SITE LOCATION PLAN

NOTES:
 1. DRAWING BASED ON DWG. NO. S-1 R1 RECEIVED FROM ISLAND WASTE MANAGEMENT INC. AND JW FIELD NOTES. DO NOT SCALE FROM DRAWING.
 2. © JACQUES WHITFORD, 2006.



Appendix B

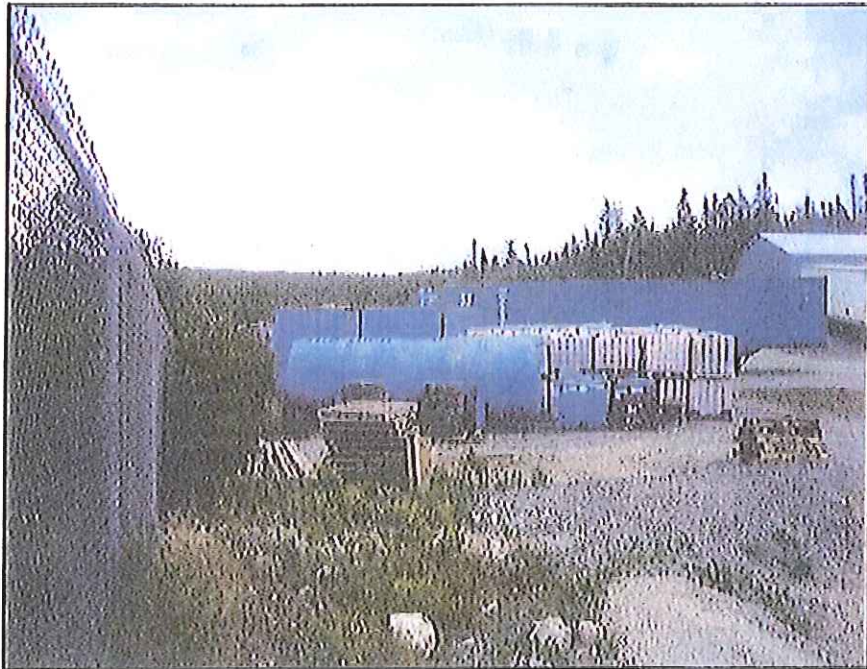
Photographs



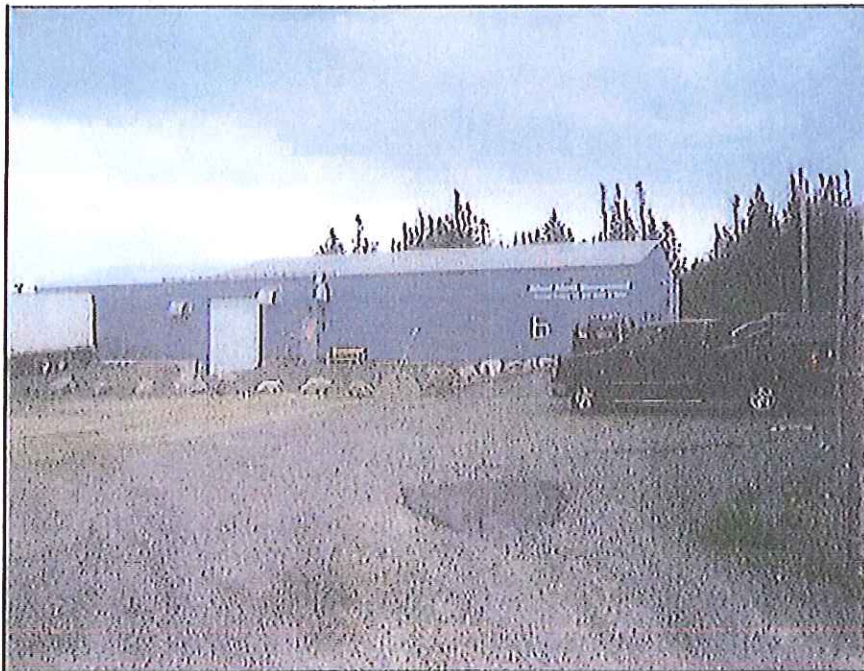
Site building and transport trailers looking east.



Plastic tote storage area, new drum storage trailers (behind totes), 22,730 L AST (left) and transport trailer looking northeast.



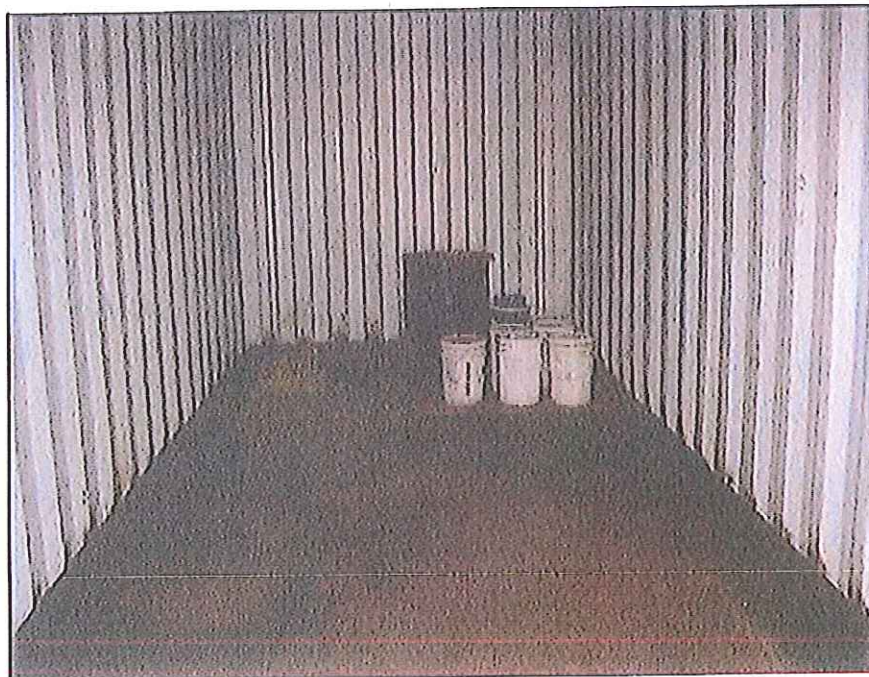
North boundary of Site looking east.



West side of Site looking southeast.



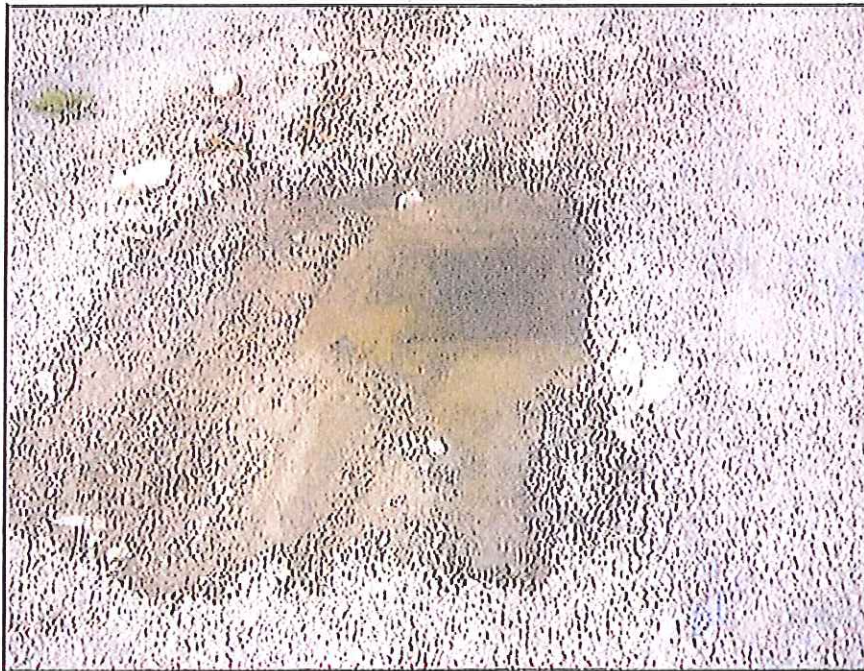
NORM storage trailer looking southwest.



Steel drum and plastic containers of NORM waste in NORM storage trailer.



Containment berm area looking north.



Sump in containment berm.



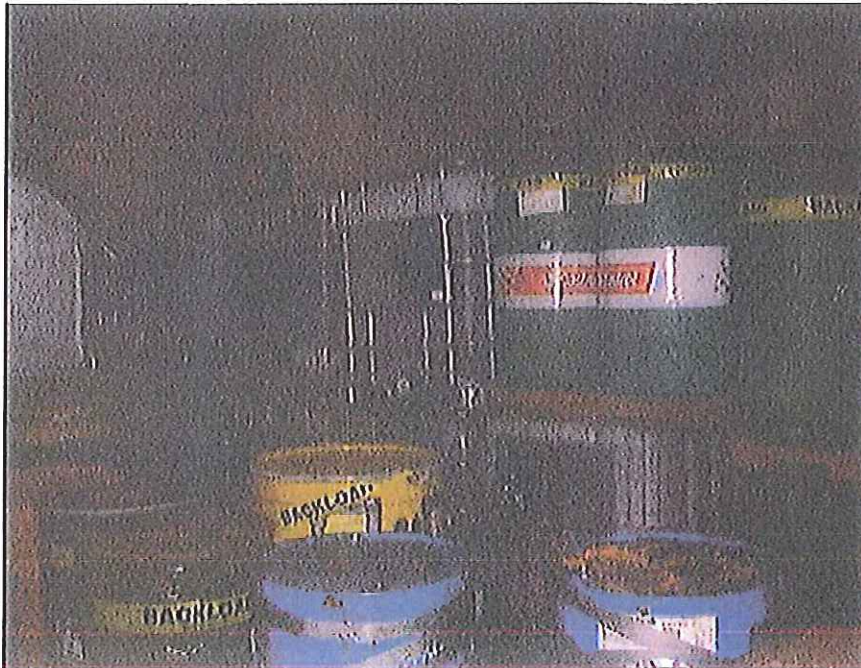
Propane storage area on east side of Site.



Surficial staining in gravel area of Site.



Surficial staining in gravel area of Site.



Drum and 1,000 L plastic tote storage in warehouse.



Propane storage area on east side of Site.



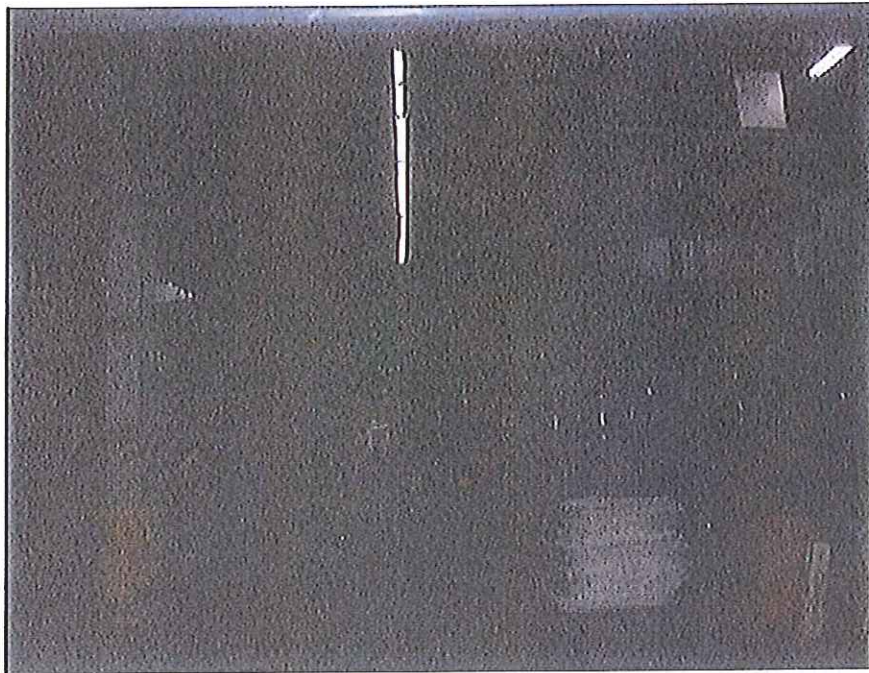
Surficial staining in gravel area of Site.



Surflolal staining in gravel area of Site.



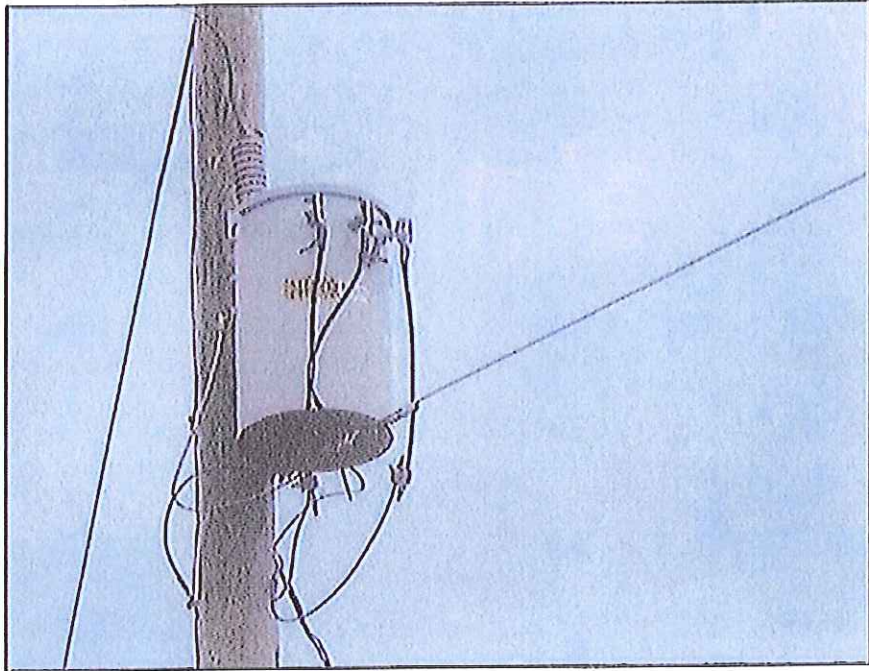
Drum and 1,000 L plastic tote storage in warehouse.



Drum storage in warehouse.



PCB-containing transformers in warehouse.



Pole-mounted transformer on west side of Site.



Rendering plant looking north from Site.

Appendix C
Assessor Qualifications



Engineering,
Scientific,
Planning and
Management
Consultants

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PHASE I ENVIRONMENTAL SITE ASSESSMENT
ASSESSOR QUALIFICATIONS – Roger Biles

Roger Biles
Field Technician

Profile

Roger Biles is an environmental technician with Jacques Whitford Environment and has a broad base of experience obtained over a period of six years in geotechnical, environmental and civil engineering. He has experience in the following areas: environmental assessment, environmental remediation, hazardous materials and occupational health and safety. Mr. Biles has supervised: water well, geotechnical and environmental drilling; PCB, hydrocarbon sampling and removal; groundwater sampling and monitoring; aquifer testing; surveying; monitor well and water well installation and design. Mr. Biles currently participates in various phases of residential and commercial environmental assessment and remediation throughout Newfoundland and Labrador. Mr. Biles has completed training in First Aid, WHMIS, confined space entry program, hot work permits, roughneck/floorman training (Oil and Gas).

Education

(Nationally Accredited) Mineral Technician, College of the North Atlantic, 1997.

Computer Aided Drafting, College of the North Atlantic, 1996.

Competences

Site Visit

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PHASE I ENVIRONMENTAL SITE ASSESSMENT
ASSESSOR QUALIFICATIONS -- Keith Rowe

Keith Rowe, M.A.Sc., P.Eng.
Project Manager

Profile

Mr. Keith Rowe, M.A.Sc., P.Eng., is an environmental engineer with Jacques Whitford Limited in St. John's, Newfoundland and Labrador. Mr. Rowe is primarily involved with conducting Phase I Environmental Site Assessments (ESA) of residential and commercial properties including site inspections, historical reviews, interviews, and reporting; conducting Property Condition Assessments (PCAs) of commercial and industrial buildings; conducting Phase II/III ESAs involving aboveground and underground petroleum storage tank removals and site remediations as well as performing hazardous materials assessments for lead, PCB and asbestos-containing materials. Mr. Rowe has also completed courses in the Building Owners and Managers Institute (BOMI) Design, Operation, and Maintenance of Building Systems, Hazardous Materials and Indoor Air Quality and Fundamentals and Management of Environmental Audits. He is currently the Phase I ESA practice leader for the Newfoundland and Labrador region.

Education M.A.Sc. – Memorial University of Newfoundland –
Environmental Sciences, 1997

B.Eng. – Memorial University of Newfoundland –
Civil Engineering, 1996

Competencies Site Visit
Report Writer
Senior Review



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**PHASE I ENVIRONMENTAL SITE ASSESSMENT
ASSESSOR QUALIFICATIONS – Paula Brennan**

Paula Brennan, M.A.Sc., P.Eng.
Project Manager

Ms. Paula Brennan, M.A.Sc., P.Eng., is an environmental engineer with Jacques Whitford Limited in St. John's, Newfoundland and Labrador. Ms. Brennan is primarily involved with conducting Phase I Environmental Site Assessments (ESA) of residential and commercial properties including site inspections, historical reviews, interviews, and reporting; conducting Property Condition Assessments (PCAs) of commercial and industrial buildings; conducting Phase II ESAs involving aboveground and underground petroleum storage tank removals and site remediations as well as performing indoor air quality and mold assessments for commercial and residential properties. Ms. Brennan has also completed courses in the Atlantic Risk Based Corrective Action (RBCA) Program; Contaminated Sites; Indoor Air Quality and Mold Assessments; and, Industrial Hygiene Principles.

Education

M.A.Sc. – Memorial University of Newfoundland –
Environmental Engineering and Applied Science,
1998
B.Eng. – Memorial University of Newfoundland –
Civil Engineering, 1994

Competencies

Site Visit
Report Writer

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Appendix D

Supporting Documentation

FEDERAL

Legislation

Canadian Environmental Protection Act:

- Storage of PCB Material Regulations (SOR/92-507)
- Federal Aboveground Storage Tank Technical Guidelines
- Federal Underground Storage Tank Technical Guidelines
- Chlorobiphenyls Regulation (SOR/91-152)
- Registration of Storage Tank Systems for Petroleum Products and Allied Petroleum Products on Federal Lands Regulations
- Guidelines for Canadian Drinking Water Quality

Canada Water Act

Fisheries Act

Transportation of Dangerous Goods Act/Regulations

Policies, Guidelines, and Codes

Canadian Council of Ministers of the Environment (CCME)

- Environmental Code of Practice for Aboveground and Underground Storage Tanks Containing Petroleum Products and Allied Petroleum Products, 1993

Government of Canada Asbestos Abatement Guidelines, 1991-01-04

Code of Good Practice for Handling Solid Wastes at Federal Establishments (Environment Canada)

PROVINCIAL

Legislation

Dangerous Goods Transportation Act

- Dangerous Goods Ticket Offences Regulations (CNLR 4/96)
- Dangerous Goods Transportation Regulations (CNLR 5/96)

Environmental Protection Act

- Air Pollution Control Regulations (CNLR 39/04)
- Gasoline Volatility Control Regulations (CNLR 62/03)
- Heating Oil Storage Tank System Regulations (NLR 60/03)
- Ozone Depleting Substance Regulations (NLR 65/03)
- Pesticides Control Regulations (CNLR 67/03)
- Storage and Handling of Gasoline and Associated Products Regulations (CNLR 58/03)
- Storage of PCB Waste Regulations (CNLR 61/03)
- Waste Management Regulations (NLR 59/03)
- Waste Material Disposal Areas (CNLR 998/96)

Fire Prevention Act, 1991

- Fire Prevention Regulations (CNLR 9/96)
- Fire Prevention Flammable and Combustible Liquids Regulations (CNLR 959/96)

Occupational Health and Safety Act

- Asbestos Abatement Regulations (CNLR 111/98)
- Occupational Health and Safety Regulations (CNLR 1165/96)
- Workplace Hazardous Materials Information System (WHMIS) Regulations (CNLR 1149/96)

Health and Community Services Act

- Sanitation Regulations (CNLR 803/96)

Public Safety Act

- Boiler, Pressure Vessel and Compressed Gas Regulations (NLR 119/96)

Radiation Health and Safety Act

- Radiation Health and Safety Regulations (CNLR 1154/96)

Policies, Guidelines, and Codes

- Department of Environment and Conservation, Pollution Prevention Division Policy Directive PPD05-01, Guidance Document for Management of Impacted Sites, February, 2005
- Asbestos Waste Disposal Policy Directive 98-03, Asbestos Waste Disposal



Engineering,
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St. John's NL
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FAX TRANSMISSION

FAX NO.	(709) 729-6969
TOTAL NO. OF PAGES	2
PROJECT NO.	1016406

Ms. Joan Hann

Department of Environment and Conservation

RE: REGULATORY INFORMATION - PHASE I ESA

We are conducting a Phase I Environmental Site Assessment for the following property:

- Island Waste Management, Special Waste Transfer Facility, 349 Incinerator Road, St. John's, NL.

Please review your records for the site and advise us in writing on:

- i) permits (e.g. certificates of approval, storage tank registrations, and/or operating permits) that pertain to activities that may impact the condition of the property (e.g. hazardous waste storage, treatment, and disposal or potential sources of information);
- ii) past, pending, outstanding or continuing prosecutions, work orders, or control orders, or complaints related to environmental compliance that may impact the condition of the property; and,
- iii) violations of environmental statutes, regulations, by-laws, approvals and permits that may impact the condition of the property.

Attached is authorization to conduct the site assessment. Thank you in advance for your assistance. Please call if you have any questions.

Yours truly,

Jacques Whitford Limited

Keith T.A. Rowe, M.A.Sc., P.Eng.

Attachment: Confirmation of Assignment

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ISO 9001:2000



August 14, 2008



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Canada A1A 4Y6

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Fax 709 676 2126

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FAX TRANSMISSION

FAX NO. (709) 729-7400
TOTAL NO. OF PAGES 2
PROJECT NO. 1016406

Mr. David MacDonald
Department of Government Services
Government Service Centre - St. John's, NL

RE: REGULATORY INFORMATION - PHASE I ESA

We are conducting a Phase I Environmental Site Assessment for the following property:

- Island Waste Management, Special Waste Transfer Facility, 349 Incinerator Road, St. John's, NL.

Please review your records for the site and advise us in writing on:

- permits (e.g. certificates of approval, storage tank registrations, and/or operating permits) that pertain to activities that may impact the condition of the property (e.g. hazardous waste storage, treatment, and disposal or potential sources of information);
- past, pending, outstanding or continuing prosecutions, work orders, or control orders, or complaints related to environmental compliance that may impact the condition of the property; and,
- violations of environmental statutes, regulations, by-laws, approvals and permits that may impact the condition of the property.

Attached is authorization to conduct the site assessment. Thank you in advance for your assistance. Please call if you have any questions.

Yours truly,

Jacques Whitford Limited

Keith T.A. Rowe, M.A.Sc., P.Eng.

Attachment: Confirmation of Assignment

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August 14, 2006



GOVERNMENT OF
NEWFOUNDLAND AND LABRADOR

Department of Environment and Conservation
Pollution Prevention Division

Date: August 24, 2006

Pollution Prevention File # 850,000,002

Jacques Whitford

Fax # 576-2126

Dear Mr. Rowe:

Re: Property Location - Island Waste Management, Special Waste Transfer Facility, Foxtrap, NL.

WE DO NOT GUARANTEE THE ACCURACY, COMPLETENESS, CURRENCY OR RELIABILITY OF THE INFORMATION PROVIDED BELOW. Any reliance on the information is at the user's own risk. You should obtain the advice of a qualified environmental consultant to conduct an environmental audit to define the environmental conditions of this property.

Further to your request in relation to the referenced property, a file review at the Department of Environment and Conservation office in St. John's has been carried out. The following information is provided as it relates to the Provincial Jurisdiction, subject to the above limitations.

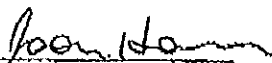
A Certificate of Approval was issued February 17, 2006 to Island Waste Management Inc., for a Hazardous Waste Management System including a Transfer Station and Transportation of Hazardous Waste Province Wide (reference COA # WMS06-02-005).

To the best of our knowledge, there are no past, pending, outstanding or ongoing orders or complaints related to compliance nor any matter of environmental significance on file for this property.

This information has been provided in consideration of your request and in view of available records.

Your request should also be sent to our agents at the Government Services Centre (Tel: 729-2008) for a review of their files. They can be contacted at the Department of Government Services.

If you have any further inquiries concerning this property, please contact Joan at Tel: 709-729-1771 or by fax: 709-729-6969; or e-mail: JoanHann@gov.nl.ca.


Joan Hann
Departmental Programme Co-ordinator
Waste Management

APPENDIX 2

Certificate of Approval

Newfoundland
Labrador

GOVERNMENT
OF
NEWFOUNDLAND AND LABRADOR
Department of Environment and Conservation
CERTIFICATE OF APPROVAL

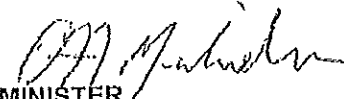
Pursuant to the *Environmental Protection Act, SNL 2002, Sections 16, 78 and 83.*

Issued:	September 30, 2010	Approval No.:	WMS06-09-015 (renewal)
Expiration:	September 30, 2014	File No.:	830.000.100
Proponent:	Newalta Corporation 315 & 349 Incinerator Road P. O. Box 16004 Stn, Foxtrap Conception Bay South, NL, A1X 2E2		
Attention:	Mr. Bill Locke Tele: 902-720-2008 Fax: 902-720-4003		
Re:	HAZARDOUS WASTE/WASTE DANGEROUS GOODS MANAGEMENT SYSTEM including a <i>Transfer Station and Transportation of Hazardous Waste/Waste Dangerous Goods Province-wide</i>		

Approval is hereby given for the continued OPERATION of a waste management system including a transfer station (located at Incinerator Road, St. John's) and the handling/storage and transportation of hazardous waste/waste dangerous goods within the Province of Newfoundland and Labrador in accordance with your application received September 21, 2010.

This approval does not release the holder from the obligation to obtain appropriate approvals from other concerned provincial, federal and municipal agencies. Nothing in this certificate of approval negates any regulatory requirement placed on the proponent. Where there is a conflict between conditions in this certificate of approval and a regulation, the condition in the regulation shall take precedence. Approval from the Department of Environment and Conservation (the Department) shall be obtained prior to any significant change in the design, construction, installation, or operation of the facility, including any future expansion of the works. This certificate shall not be sold, assigned, transferred, leased, mortgaged, sublet or otherwise alienated by the holder without obtaining written prior approval from the Minister.

This approval is subject to the terms and conditions as contained in Appendix 'A' attached hereto, as may be revised from time to time by the Department of Environment and Conservation. Appendix 'A' forms part and parcel of this certificate of approval. Failure to comply with any of the terms and conditions may render this certificate of approval null and void, may require the proponent to cease all activities associated with this certificate of approval, may place the proponent and its agent(s) in violation of the *Environmental Protection Act, SNL, 2002, c. E-14-2*, and will make the proponent responsible for taking such remedial measures as may be prescribed by the Department of Environment and Conservation. The Department reserves the right to add, delete, modify or revoke this approval at any time.


For MINISTER

General

1. Approval is hereby given for the continued operation of a hazardous waste/waste dangerous goods management system.
2. The application for this Certificate of Approval included:
 - Letter requesting an *Amendment to Certificate of Approval # WMS06-09-015* dated September 21, 2010.
 - Emergency Response "*Contingency Plan For the Operation of a Special Waste Transfer Station*";
 - Emergency Response Revised "*Contingency Plan For the Operation of a Biomedical Waste Collection System*"
 - Surety Bond No. *CMS0130019*.
 - Contractors Pollution Liability from
 - Automobile Liability Insurance
3. This waste management system is NOT authorized for the collection, transportation or storage of:
 - Explosive materials included in Class 1-Explosives under Federal Transportation of Dangerous Goods (TDG) Act & Regulations; or
 - Radioactive materials included in Class 7- Radioactive under federal TDG Act & Regulations.
 - NORM or NORM waste with activity greater than 70 Bq/g;
4. Prior to any expansion or modification of the facility, a letter of application shall be forwarded to GSC requesting an amendment to this approval.
5. This approval shall apply to the holder, their employees, contractors, subcontractors and associates engaged in activity described in the application and this approval.
6. Records of laboratory testing, manifesting documentation (import and export of hazardous waste), volumes, sources, types and disposal locations of wastes received from each pickup and delivered on each trip are to be kept for at least two years, and are to be made available to Department staff upon request.

Definitions

7. In this Certificate of Approval:
 - **Bequerel (Bq)** means a unit which measures the level of radioactivity from all sources (alpha, beta, and gamma). A Bequerel is equal to one nuclear transformation per second.

- **Biomedical Waste** means waste that is generated by human or animal health care facilities, medical or veterinary research and teaching establishments, health care teaching establishments, clinical testing or research laboratories or facilities involved in the production or testing of vaccines and includes:
- **Department** means Department of Environment and Conservation and its successors;
- **Director** means the Director of GSC;
- **BTEX** means benzene, toluene, ethylbenzene, and/or xylene;
- **CCME** means Canadian Council of Ministers of the Environment;
- **CEQG** means CCME Canadian Environmental Quality Guidelines;
- **GSC** means Government Service Centre of the Department of Government Services;
- **Hazardous Waste/Waste Dangerous Goods**
 - means any substance coming within the meaning of waste & which exhibits a hazard classification of a gas, flammable solid or liquid, is dangerously reactive, an oxidizer, is leachable toxic, infectious, corrosive, is an acute and chronic poison or are environmentally hazardous as may be determined in the *Environmental Protection Act* and Regulations. For a detailed definition please see - CEPA 1999, *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations definition of Hazardous Waste -- section 1*).
 - But does not include the following:
 - (a) Explosive materials included in Class 1-Explosives under Federal Transportation of Dangerous Goods (TDG) Act & Regulations;
 - (b) Radioactive materials included in Class 7-Radioactive under federal TDG Act & Regulations; and
 - (c) NORM or NORM waste with activity greater than 70 Bq/g;
- **Hydrocarbon contaminated soil** means soil containing equal to or greater than 1000 ppm TPH;
- **Leachable Toxic Waste (LTW)** means waste material which, upon laboratory analysis, is shown to contain levels of contaminants that exceed parameters listed in the CCME Canadian Soil Quality Guidelines (CSQG), and/or the leachate from the material exceeds criteria limits when the material is subjected to the leachate (TCLP) test;

- **Leachate Test** means the U.S. EPA Toxicity Characteristic Leaching Procedure (TCLP), Test Method 1311 (as amended) that is used to determine the leachate toxicity hazard.

The TCLP Canadian Equivalent is a standard designed to determine the mobility of both organic and inorganic analytes present in liquid, solid and multi-phase wastes. If a total analysis of the waste demonstrates that individual analytes are not present in the waste or that they are present but at such low concentrations that the appropriate regulatory levels could not possibly be exceeded, the test need not be run.

This test does not apply to metals in non-dispersible form, which are bits and pieces of metal parts, bars, rods, sheets, wires, cables, bales, scrap automobiles (crushed, baled, shredded or otherwise), railroad box cars, used beverage cans, whole television sets and white goods.

The criteria limits are outlined in the Department's Guidance Document GD-PPD-26: Leachable Toxic Waste, Testing and Disposal, Revised November 2003;

- **NC** means NEWALTA Corporation.
- **NORM** means Naturally Occurring Radioactive Material;
- **TPH** means total petroleum hydrocarbons;
- **PAH** means polycyclic aromatic hydrocarbons;
- **PCBs** means polychlorinated biphenyls that have the molecular formula $C_{12}H_{10-n}Cl_n$ in which "n" is greater than 2;
- **PCB liquid** means a liquid containing more than 50 parts per million by weight of PCBs;
- **PCB solid** means a material or substance other than PCB liquid that contains PCBs at a concentration greater than 50 parts per million by weight and includes contaminated materials and solids;
- **PCB Storage Site** means a place or property that is used to store PCB wastes. Furthermore:
 - (a) *The Storage of PCB Wastes Regulations and PCB Regulations (CEPA)* apply to all storage sites containing
 - i. PCBs in a quantity exceeding 1 kilogram;
 - ii. PCB liquids of a volume greater than 100 litres; or
 - iii. PCB solids of a weight greater than 100 kilograms.

- (b) For the purpose of determining whether the quantity, volume or weight of PCBs, PCB liquids or PCB solids exceeds the amount specified in above section (a), the total amounts stored at all locations within or around the same place or property shall be added together;
- PCB wastes means PCB liquids, PCB solids and PCB equipment that have been taken out of service for the purpose of disposal;
 - PPD means Pollution Prevention Division of the Department;
 - Sievert (Sv) means a unit which measures the effective dose or biological effect of radioactivity;
 - SVOC means semi-volatile organic compound;
 - TCLP means toxicity characteristics leaching procedures (US EPA Method 1311);
 - Temporary Storage means storage of hazardous waste materials on the holder's property in St. John's for a period of up to 90 days (pending export to approved pretreatment, treatment &/or destruction site or facility); and
 - US EPA means United States Environmental Protection Agency.

Legislation

8. The activities associated with this facility/project may involve, but not be limited to, provincial Acts and Regulations which are as follows:
- *Environmental Protection Act;*
 - *Water Resources Act;*
 - *Dangerous Goods Transportation Act and Regulations (provincial);*
 - *Storage and Handling of Gasoline and Associated Products Regulations, 2003;*
 - *Air Pollution Control Regulations, 2004;*
 - *Used Oil Control Regulations;*
 - *Environmental Control Water and Sewage Regulations, 2003;*
 - *Halocarbon Regulations;*
 - *Waste Management Regulations, 2003;*
 - *Storage of PCB Waste Regulations; and*
 - *Newfoundland Fire Protection Act and Regulations.*
9. The activities associated with this facility/project may involve, but not be limited to, federal Acts and Regulations which are as follows:
- *Canadian Environmental Protection Act and Regulations;*
 - *Interprovincial Movement of Hazardous Waste Regulations;*

- *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations;*
- *Transportation of Dangerous Goods Act and Regulations;*
- *Fisheries Act; and*
- *National Fire Code.*
- *PCB Regulations*

Emergency & OHS Preparedness

10. NC shall ensure that this approval, or a copy, is kept on site at all times and that personnel directly involved in the operation of the waste management system are made fully aware of the terms and conditions which pertain to this approval.
11. All responsible personnel who are directly involved with operation and maintenance of waste management system shall be provided copies of this approval.
12. NC shall ensure that all staff is alerted to hazards associated with all materials received. In addition, sufficient equipment, sorbents, and related clean-up materials must be kept on hand in the event of a leak or a spill during storage, handling, or transportation.
13. Environmental emergencies and/or spills shall be reported immediately through the Canadian Coast Guard at 1-(709)-772-2083 or 1-800-563-9089.
14. All appropriate health and safety procedures shall be constantly maintained at the site in accordance with applicable legislation.
15. NC shall maintain a contingency plan for the operation of the waste management system. The contingency plan shall clearly describe the actions to be taken in the event of a spill of a toxic or hazardous material. It shall include, as a minimum: notification and alerting procedures; duties and responsibilities of the "on-scene commander" and other involved staff; spill control and clean-up procedures; restoration of the spill site; information on disposal of contaminants; and resource inventory. Copies of the plan shall be placed in convenient areas throughout the transfer station and in each vehicle used in the operation of this waste management system, so that employees can easily refer to it when needed. NC shall ensure that all employees are aware of the plan and understand the procedures and the reporting protocol to be followed in the event of an emergency. An annual response exercise is recommended for response personnel. Every year, as a minimum, the plan shall be reviewed and revised as necessary. Any proposed significant revisions shall be submitted to the Director for review.
16. Every time NC implements the contingency plan, information shall be recorded for future reference. This will assist in reviewing and updating the plan. The record is to consist of all incidents with environmental implications, and include such details as: date; time of day; type of incident (i.e. liquid spill, gas leak, granular chemical spill, equipment malfunction, etc.); actions taken; problems encountered; and other relevant information that would aid in later review of the plan performance. Each incident report shall be

submitted to the Director as per the *Reporting* section.

Further Assessment

17. The Minister may at any time, with reasonable notice, require NC to conduct or have conducted environmental studies, site assessments, sampling, testing, or investigations where, based upon reasonable and probable grounds, if the Minister is of the opinion that this waste management system may have had, or has the potential to have, an adverse effect on the environment.

Government Service Centre

18. Through a Memorandum-of-Understanding, the Department has authorized the GSC to act on its behalf in monitoring this operation for compliance under this approval and all applicable provincial Acts and Regulations.

Financial Assurance

19. Valid environmental liability impairment insurance in the amount of at least \$1,000,000 shall be maintained and a surety bond of \$20,000 shall be on file with the Department; otherwise this approval is null and void.
20. Automobile liability insurance for all owned and un-owned licenced vehicles used in connection with the waste management system (which provides coverage against liability arising from third party bodily injury or property damage for a minimum of \$ 1.0 million per occurrence) shall be carried.
21. Annual updates of the documents shall be filed with the Department.
22. Three months advance notice must be provided if the insurance or the surety bond if NC intends to cancel and/or change the insurer or bonding agent.

Security and Signage

23. Unauthorized access to the site shall be restricted.
24. Tank and line drain valves and gate access shall be secured in a locked position at the end of each business day.
25. The facility shall be fenced at the entrance and a lockable access gate shall be installed to prevent unauthorized access.
26. A durable sign shall be posted at the gate listing the company name, hours of operation and a contact name and number to be called in the event of an emergency situation. Other signage relating to access restrictions and fire/health/safety restrictions shall be

prominently displayed.

27. Areas of the site shall be clearly marked to indicate the nature of the hazard.

Transportation of Dangerous Goods & Training

28. The characteristics of the waste product being collected will determine whether or not provisions of provincial and/or federal dangerous goods regulations apply. Safety standards, placards, labels, tanker truck inspections, etc. under the provisions of the *Transportation of Dangerous Goods Act and Regulations* are applied to all transport of waste and hazardous waste dangerous goods.
29. The waste manifesting provisions of the *Canadian Environmental Protection Act, Inter-provincial Movement of Hazardous Waste Regulations*, are the responsibility of the Waste Management Section, of the Department. *Waste manifest forms may be obtained from the Department (Tele - 709-729-1771)*. Completed hazardous waste transport manifests shall be remitted to the Department either prior to shipment or immediately following each export shipment.
30. Hazardous waste transported to "Receivers" for treatment prior to disposal both within Newfoundland & Labrador and Canada must be licensed by the Province having jurisdiction. A copy of the license must be submitted to the Department showing that the Receiver is in good standing with the Province of jurisdiction.
31. Waste shall be transported in an enclosed vehicle or a vehicle to which a tarpaulin or netting is attached to prevent the loss of waste while the vehicle is moving in excess of 0.5 kilometres.
32. Liquid waste must be transported in a secure vehicle to prevent any loss during transportation. Care must be taken during tank pump out procedures to ensure no spillage takes place.
33. The company name and phone number shall be printed on both doors and rear of all vehicles used in the collection and transportation of liquid wastes. All lettering shall be at least 5 centimetres in height.
34. All motor vehicles used in this operation must be inspected and certified as road worthy by the Motor Registration Division of the Department of Government Services.
35. The *Dangerous Goods Transportation Act and Regulations* require that all personnel involved in the handling, offering for transport, and transport of dangerous goods participate in a training program which includes the essential training components as outlined in the federal *Transportation of Dangerous Goods Act and Regulations*. In addition to these essential components, the training program shall also include relevant waste management legislation, regulations, and guidelines and the major environmental and health and safety concerns for the wastes to be handled, offered for transport, or

transported. This training is a requirement of the Certificate-of-Approval.

36. The transportation of forms of hazardous waste not described in the application for this Certificate of Approval must be approved by the Department.
37. Waste importation is restricted unless advance, written authorization is obtained from the Department.
38. Municipal and industrial landfills in this province are not permitted to accept hazardous waste materials. Non-hazardous wastes may be disposed of to a landfill with the approval of the GSC and landfill owner/operator.

General Storage

39. The storage buildings shall be maintained in a condition capable of retaining any spillage which may occur.
40. Each storage cell shall contain appropriate emergency response equipment. Accessible safety and emergency equipment shall be maintained at the facility.
41. All hazardous waste must be stored in labelled containers or drums.
42. Waste containers at the site shall not be stacked more than two (2) drums in height.
43. A minimum distance of 50 centimetres shall be maintained between rows of containerized wastes. A row of waste shall not exceed 240 centimetres in width.
44. Containers of waste with incompatible chemical characteristics shall be segregated from one another and stored in separate storage cells.
45. All containers of waste shall be properly labelled, marked and inventoried. Upon completion of a lab pack, the outer container shall also be properly labelled and marked and an inventory of the contents attached to the container. The date of completion of the lab pack shall also be indicated on the inventory.
46. The facility shall be equipped with intrusion alarms and fire and gas detection systems in all storage, handling, and laboratory areas. Alarms shall be monitored and kept in good operating order at all times.
47. All wastes shall be shipped from the site within one (1) year from the date of receipt.
48. Contaminated fluids and washwater generated by the cleaning of containers or equipment shall be recovered and disposed of in an approved manner.

Polychlorinated Biphenyls (PCBs)

49. Transportation of PCB materials must fully comply with the *Transportation of Dangerous Goods Act* and the *Interprovincial Movement of Hazardous Waste Regulations* under the *Canadian Environmental Protection Act*.
50. NC shall fully comply with *The Storage of PCB Wastes Regulations* under the *Environmental Protection Act and PCB Regulations under Canadian Environmental Protection Act (Federal Legislation)*.
51. Collection and transport of PCB wastes to the Incinerator Road site shall take place immediately following an off-site cleanup or decommissioning project. A Certificate of Approval is required for the off-site storage of PCB wastes in accordance with *The Storage of PCB Wastes Regulations*.
52. PCB waste solids and liquids received at the transfer station shall:
 - (a) be accompanied by a lab test report which confirms that the concentration of PCB in the waste exceeds the 50 ppm regulatory limit or exceeds the Site Specific Target Level established at a PCB contaminated site, or
 - (b) be known to be hazardous and contain PCB levels that exceed the regulatory criteria as identified by product name, material safety data sheet or manufacturer's product information sheet. Analysis for the presence of PCBs shall be undertaken if NC suspects transformer oil, coolants or various other used oil or waste may contain PCBs in a concentration which exceeds regulatory criteria.
53. NC shall accept the return of all PCB waste if the laboratory analysis shows concentrations of PCBs to be greater than 50 ppm; the limit for PCB designation as defined by *The Storage of PCB Wastes Regulations*.
54. PCB fluids, flushing solvents, mineral oil and other liquids contaminated greater than 50 ppm PCB shall be placed in drums of at least 16 gauge steel. Drum bungs shall be caulked with a PCB-resistant material. At least ten centimeters shall be left at the top of the container to allow for fluid expansion due to temperature changes.
55. PCB contaminated soil, small capacitors, and other solids shall be contained within bins or closed steel drums with gaskets made of a PCB-resistant material such as nitrile rubber or cork. Capacitors and any similar heavy equipment shall also be placed inside a polyethylene bag or sheeting and packed with absorbent material.
56. Transformers and capacitors must continue to display their existing serialized PCB warning labels and barrels must have a non-serialized label
57. Large volumes (greater than 1000 litres) of fluids from non-PCB transformers must be analysed for PCB content and must meet the requirements of this Department before disposal.
58. Drums of PCB liquids are not to be stacked.

Appendix A

59. Drums of PCB solids are not to be stacked more than two drums high.
60. There must be a minimum distance of 50 centimeters between the rows of palletized drums.
61. A proposal to decontaminate a transformer and fill with an alternative fluid (a retro-filling proposal), with a view to returning to service, must be approved in advance by this Department.

Used Oil Collection & Handling

62. A used oil collector may deliver used oil to:
 - an approved used oil storage facility;
 - an approved used oil re-refinery or treatment facility; or
 - an approved used oil combustion facility.
63. The operator of a collection vehicle shall where possible visually inspect each tank/drum of used oil for visible contamination before the contents are transferred to the collection tank/truck to avoid contaminating the used oil that has been collected.
64. Used oil collectors and transporters are prohibited from blending used oils with virgin oil to dilute meet the specification levels for used oil combustion. In addition, used oils assigned different classifications as described in Appendix B shall not be knowingly mixed (blended) with other used oil or hydrocarbon except as permitted in the *Used Oil Control Regulations*.
65. The mixing (blending) of otherwise uncontaminated products resulting from the flushing of product lines from a tanker, tank vessel, tank car or tanks at a bulk plant or similar facility is not considered contamination. Blending of different used oils may also occur along a collection route and during initial bulking after collection.
66. Records of the volume of used oil received or collected within this province shall be maintained and the held for a period of not less than three years. These records shall include the date of the transaction, volume and the name of the receiver/collector and made available for review by the GSC.
67. Records of the volume of used oil transferred for combustion or treatment and for shipment out of province shall be maintained and the held for a period of not less than three years. These records shall include the date of the transaction and the name of the receiver/collector and made available for review by the GSC.
68. An annual summary of the records of received, collected and transferred shall be provided to the GSC in electronic or hard copy form by January 31 of each year.
69. Constant compliance with Section 22.2 and 22(3)b of the *Used Oil Control Regulations*

shall be maintained.

S. 22.2 "A person who disposes of, offers for sale, sells or transfers possession of used oil under subsection 22(1) of the Used Oil Control Regulations (O. C. 2002-430) shall first

- (a) obtain a certificate of analysis of the results of a representative sample or samples of that used oil from an accredited laboratory and
- (b) supply copies of the certificate of analysis to the minister and the used oil collector."

OR S. 22.3 (b) notwithstanding subsection 22(2), a person, instead of complying with subsection (2), may enter into an agreement in writing, with a used oil collector which provides for (b) the used oil collector to obtain a certificate of analysis of the results of a representative sample or samples of the used oil, either before or after bulking, from an accredited laboratory. All holding tanks for used oil shall be approved by GSC as per the *Used Oil Control Regulations*

NORM STORAGE

70. The temporary storage of NORM contaminated material shall be in accordance with the NORM Management Plan submitted by NC as part of their application and the *Canadian Guidelines for the Management of Naturally Occurring Radioactive Materials* (hereafter referred to as the *NORM Guidelines*).
71. NORM contaminated material shall be stored in steel containment dyke system located on the site. The NORM storage area shall be clearly identified. NORM waste can be stored for up to 90 days from receipt at which time all materials must be shipped off site to an authorized facility for disposal.
72. NORM contaminated material shall be stored in leak proof containers which shall be stacked no more than 2 drums high. Storage containers shall be continuously maintained in good condition.
73. NORM contaminated material with activity greater than 70 Bq/g shall not be accepted by NC.
74. NORM contaminated material shall not be stored with any other type of material or be stored on the site for more than one year from the date it was received, unless approved in writing by this Department.
75. The annual effective dose (above background and medical exposure), shall not exceed:

20 mSv/a	for occupationally exposed workers; and
1 mSv/a	for incidentally exposed workers or the public.

Note: A maximum dose of 50 mSv in one year for an occupationally exposed worker is allowed provided that the total effective dose over a five-year period is limited to 100

Appendix A

mSv.

76. The 5 year cumulative dose (above background and medical exposure), shall not exceed:
- | | |
|---------|---|
| 100 mSv | for occupationally exposed workers; and |
| 5 mSv | for incidentally exposed workers or the public. |
77. Only radiation survey meters and contamination meters approved by the *Canadian Nuclear Safety Commission* shall be used in NORM surveys. Survey equipment shall be calibrated in accordance with manufacturer's specifications.
78. Each container of NORM contaminated material shall be sampled and have radiochemical analysis performed when received.
79. NC shall conduct an Initial Review (as defined in the *NORM Guidelines*) of the NORM storage workplace to determine if the investigation threshold of 0.3 mSv/a has been exceeded.
80. If the Initial Review determines that there is a potential to exceed 0.3 mSv/a, a Radiation Dose Assessment (as defined in the *NORM Guidelines*) shall be completed. This assessment may include gamma dose-rate measurements, airborne radioactivity evaluation or radiochemical analysis. The results of the any Radiation Dose Assessments shall be maintained on site for a period of not less than 2 years and shall be made available to the Department upon request.
81. If the estimated annual effective dose is greater than 0.3 mSv/a, then dose management precautions shall be followed which may include use of protective clothing, engineering controls, and personal radiation dosimeters.
82. If the estimated annual effective dose is greater than 5 mSv/a, then a formal radiation protection program (as defined in Appendix G of the *NORM Guidelines*) shall be initiated. Radiation shielding shall be provided to site workers in accordance with the *NORM Guidelines*.
83. The NORM Management Plan shall be reviewed and updated on an annual basis.
84. The NORM storage area shall be inspected daily for evidence of loss of containment. These inspections shall be logged and maintained on site for a minimum of 2 years, and made available for review by inspectors of the Department and its agents at the GSC.

Spill Prevention

85. Areas in which chemicals are used or stored shall have impermeable floors and dykes or curbs and shall not have a floor drain system, nor shall it discharge to the environment. Areas inside the dykes or curbs shall have an effective secondary containment capacity of at least 110% of the chemical storage tank capacity, in the case of a single storage

container. If there is more than one storage container, the dyked area shall be able to retain no less than *110% of the capacity of the largest container or 100 % of the capacity of the largest container plus 10% of the aggregate capacity of all additional containers, whichever is greater*. Once a year, the dykes should be visually inspected for their liquid containing integrity, and repairs shall be made when required

86. These dyked areas shall be kept clear of material that may compromise the capacity of the dyke system.

Analysis and QA/QC

87. Unless otherwise stated herein, all solids and liquids analysis performed pursuant to this Approval shall be done by either a contracted commercial laboratory or an in-house laboratory. Contracted commercial laboratories shall have a recognized form of accreditation. In-house laboratories have the option of either obtaining accreditation or submitting to an annual inspection by a representative of the Department, for which NC shall be billed for each laboratory inspection in accordance with Schedule 1 of the *Accredited and Certified Laboratory Policy (GD: PP2001-01)*.
88. Recommendations of the Department stemming from the annual inspections shall be addressed within 6 months, otherwise further analytical results shall not be accepted by the Department.

Reporting

89. All incidents of:

- *Contingency Plan* implementation;
- non-conformance of any condition within this approval; or
- verbal/written complaints of an environmental nature from the public received by NC related to the hazardous waste management system, whether or not they are received anonymously;

shall be immediately reported, within one working day, to a person, message manager or facsimile machine as follows:

- contact the GSC (St. John's office) by phoning (709) 729-2550, or faxing (709) 729-7400; or
- contact the GSC (Corner Brook office) by phoning (709) 637-2204, or faxing (709) 637-2681.

A written report including a detailed description of the incident, summary of contributing factors, and an action plan to prevent future incidents of a similar nature, shall be submitted to the Director. The action plan shall include a description of actions already taken and future actions to be implemented, and shall be submitted within thirty days of the date of the initial incident. The addresses for the respective written report submission

is:

GSC (St. John's)
P.O. Box 8700
St, John's, NL
A1B 4J6
Telephone: (709) 729-2550
Facsimile: (709) 729-7400

Decommissioning

90. Written notification shall be provided in advance to the GSC of decommissioning of this waste management system.
91. Decommissioning of this waste management system shall comply with the nine minimum acceptable decommissioning requirements for an industrial site in accordance with the *CCME National Guidelines for Decommissioning Industrial Sites*.

Expiration

92. This approval expires *September 30, 2014*.
93. Should NC wish to continue to operate beyond this expiry date, a written request shall be submitted to DOEC for the renewal of this approval. Such request shall be made prior to *August 30, 2014*.

Table of Contamination Limits (taken from the <i>Used Oil Control Regulation</i>)		
Substance	Concentration (milligrams/kilogram)	
	Column 2	Column 3
Column 1		
Polychlorinated Biphenyls (PCBs)	5	50
Total Organic Halogens (as chlorine)	1000	3000
Cadmium	2	2
Chromium	10	10
Lead	10	100
Note: Dilution of used oil to meet these concentrations is not acceptable.		

"class 1" means any used oil in which the concentration of each contaminant listed in column 1 of the Schedule is below or equal to the corresponding level in column 2 of the Schedule;

"class 2" means any used oil in which the concentration of each contaminant listed in column 1 of the Schedule is below or equal to the corresponding level in column 2 of the Schedule, with the exception of lead. The concentration of lead is above the corresponding level in column 2 of the Schedule and below or equal to the corresponding level in column 3 of the Schedule.

"class 3" means any used oil in which the concentration of each contaminant listed in column 1 of the Schedule is below or equal to the corresponding level in column 2 of the Schedule, with the exceptions of polychlorinated biphenyls (PCBs) and total organic halogens (TOHs). The concentration of PCBs or TOHs is above the corresponding level in column 2 of the Schedule and below or equal to the corresponding level in column 3 of the Schedule.

"class 4" means any used oil in which the concentration of at least one of the contaminants listed in column 1 of the Schedule is above the corresponding level in column 3 of the Schedule;

c.c.

Glen Worthman,
A/Head Toxics and Emergencies
Environment Canada
Bruce Street
Mount Pearl, NL
A1N 4T3
Email glenn.worthman@ec.gc.ca

Office of the Fire Commissioner
Bldg. 901 Pleasantville
P.O. Box 8700
St. John's, NL
A1B 4J6

Mr. Art Cheeseman
Director of Engineering and Planning
City of St. John's
P.O. Box 908
St. John's, NL.
A1C 5M2

APPENDIX 3

Certificate of Insurance



Certificate of Insurance

No.: **NAC-2012-142-MAN** Dated: **March 29, 2012**
 This document supersedes any certificate previously issued under this number.

This is to certify that the Policy(ies) of Insurance listed below ("Policy or Policies") have been issued to the Named Insured identified below for the policy period(s) indicated. This certificate is issued as a matter of information only and confers no rights upon the Certificate Holder named below other than those provided by the Policy(ies).

Notwithstanding any requirement, term or condition of any contract or any other document with respect to which this certificate may be issued or may pertain, the insurance afforded by the Policy(ies) is subject to all the terms, conditions and exclusions of such Policy(ies). This certificate does not amend, extend or alter the coverage afforded by the Policy(ies). Limits shown are intended to address contractual obligations of the Named Insured.

Limits may have been reduced since Policy effective date(s) as a result of a claim or claims.

Certificate Holder: To Whom It May Concern	Named Insured and Address: Newalta Corporation 211 - 11 th Avenue SW Calgary, AB T2R 0C6
---	---

Type(s) of Insurance	Insurer(s)	Policy Number(s)	Effective / Expiry Dates	Sums Insured Or Limits of Liability	
COMMERCIAL GENERAL LIABILITY <ul style="list-style-type: none"> • Cross Liability • Blanket Contractual Liability • Forest and Prairie Protection Acts Expense • Non-Owned Automobile • Products & Completed Operations • Employer's Liability (Canadian Employees) • Personal Injury & Advertising Injury • Broad Form Property Damage 	ACE INA Insurance	CGL523924	Apr 01, 2012 to Apr 01, 2013	Combined Inclusive Limit Per Occurrence for Bodily Injury and Property Damage	\$ 1,000,000
				Products & Completed Operations Aggregate	\$ 1,000,000
				General Aggregate	\$ 5,000,000
AUTOMOBILE <ul style="list-style-type: none"> • All vehicles owned by, registered in the name of and/or leased by the Insured. • Permission to Rent or Lease Endorsement 	Zurich Insurance Company	9801523	Apr 01, 2012 to Apr 01, 2013	Third Party Liability for Bodily Injury to or death of any person or damage to property – Each Occurrence	\$ 2,000,000
UMBRELLA <ul style="list-style-type: none"> • Excess of these Underlying Policies • Commercial General Liability • Automobile Liability • Contractors Pollution Liability 	Underwriters at Lloyd's of London	M0322412(1)	Apr 01, 2012 to Apr 01, 2013	Limit Excess of Scheduled Underlying Insurance per Occurrence	\$ 5,000,000
CONTRACTORS POLLUTION LIABILITY <ul style="list-style-type: none"> • Errors and Omissions Liability 	ACE INA Insurance	EIL 333549	Apr 01, 2012 to Apr 01, 2013	Each Claim / Aggregate Claims Made Policy	\$ 5,000,000
PROPERTY ALL RISKS <ul style="list-style-type: none"> • Owned or where Insured is under legal obligation to keep insured 	Chartis Insurance Company of Canada Royal & Sun Alliance Insurance Company of Canada	MMCC12009	Apr 01, 2012 to Apr 01, 2013	Combined Single Limit Per Occurrence	\$ 1,000,000



Certificate of Insurance

No.: NAC-2012-142-MAN

Dated: March 29, 2012

This document supersedes any certificate previously issued under this number.

Notice of cancellation:

The Insurer(s) affording coverage under the policies described herein will not notify the certificate holder named herein of the cancellation of such coverage.

Marsh Canada Limited

Livingston Place, Suite 1100
222 -3rd Avenue SW
Calgary, AB T2P 0B4
Phone: 403-476-3467
Fax: 403-261-9882
linda.bracegirdle@marsh.com

Marsh Canada Limited

By:

Linda Bracegirdle

APPENDIX 4

Letter of Good Standing

NLCSA

Letter of Good Standing

Certificate of Recognition™ Program

October 17, 2012

Issued To: Newalta Corporation
3 Spectacle Lake Dr. Unit#290
Dartmouth, NS, B3B 1W8

Based upon a review of NLCSA records

Newalta Corporation

is an active participant in the Certificate of Recognition™ (COR™) Program, and is therefore in good standing with the Newfoundland and Labrador Construction Safety Association. This letter is based on the information available to the NLCSA as of the date listed and is valid until the expiration date.

Commencement Date: August 10, 2001 Expiry Date: April 12, 2013

This letter of good standing is issued to a firm actively participating in the NLCSA COR™ program and whose current standing falls into the category noted below:

Certificate of Recognition

Audit Pending

In Process

Note: NLCSA's records are compiled from information gathered during a firm's participation in NLCSA programs, which information is believed to be correct. This letter is based on information currently available to the NLCSA, and is not certified or warranted for accuracy. NLCSA assumes no responsibility or liability for the information contained in this letter.



NLCSA Representative

APPENDIX 5

Risk Management Manual (RMM)

Table of Contents

NEWALTA		
<i>Prepared by:</i> <i>D. Whelan/B. Locke</i>	<i>Risk Management Manual</i>	<i>Issued: 1999</i>
		<i>Rev # 3.0</i>
<i>Approved by: D. Pippard</i>	<i>Table of Contents</i>	<i>Rev Date: October 2009</i>
	<i>Page i</i>	

1.0 Preface

2.0 Definition of Terms

3.0 Management Commitment

- 3.1 Newalta Safety Policy
- 3.2 Newalta Environmental Policy
- 3.3 Responsibility & Accountability for Health, Safety & Environmental Systems
- 3.4 Newalta Drug and Alcohol Program
- 3.5 Right to Refuse Unsafe Work

4.0 Loss Control

- 4.1 Definition of Worksite Hazards and Loss Exposures
- 4.2 Hazard Identification / Recognition
- 4.3 Engineering Controls / Construction Requirements
- 4.4 Management of Change (MoC)
- 4.5 Risk Evaluation, Risk Management, and Control Activities
- 4.6 Preventative Maintenance Programs
- 4.7 Hazard and Operability Assessments. (HAZ-OPS)
- 4.8 Hazard Assessment/Aspects Assessments & Risk Control
 - 4.8.1 Job Inventory
 - 4.8.2 Job Task Inventory
 - 4.8.3 Job Task Rating
 - 4.8.4 Critical Task Analysis
 - 4.8.5 Safe Operating Procedures (SOP's)
- 4.9 Field Level Hazard Assessments

5.0 Environmental Management

- 5.1 Operating Permits
- 5.2 Facility Storage
 - 5.2.1 Pads, Pits, and Sump Monitoring
- 5.3 Environmental Monitoring

NEWALTA		
<i>Prepared by:</i> <i>D. Whelan/B. Locke</i>	<i>Risk Management Manual</i>	<i>Issued: 1999</i>
		<i>Rev # 3.0</i>
<i>Approved by: D. Plppard</i>	<i>Table of Contents</i>	<i>Rev Date: October 2009</i>
	<i>Page iii</i>	

9.0 Monitoring & Measuring

- 9.1 Workplace Inspections
- 9.2 Vehicle Inspections
- 9.3 Conduct During Government Inspections
- 9.4 Environmental, Health & Safety Management System Audits
- 9.5 Loss Control Activities Reporting (LCAR)
- 9.6 EH&S Performance Statistics
- 9.7 Management Review
- 9.8 Objectives & Targets
- 9.9 Property Loss Prevention Reports
- 9.10 Acquisition Due Diligence
- 9.11 Client Site Services (See also Appendix 6 - On-site services manual - Table of Contents)

10.0 Emergency Preparedness and Response

- 10.1 General Emergency Response Procedures
- 10.2 Site Specific Emergency Response Plans
 - 10.2.1 Emergency Actions
 - 10.2.2 Emergency Contact Lists
 - 10.2.2.1 Emergency Response Flow Chart
 - 10.2.2.2 Emergency Contact Check List
 - 10.2.2.3 Government and Other Contacts
- 10.3 Alarms and Initiation of Emergency Actions
- 10.4 Emergency Equipment and Supplies
 - 10.4.1 Required First Aid Supplies & Equipment
 - 10.4.2 Eye Wash Stations / Deluge Showers
 - 10.4.3 Fire Fighting Equipment
- 10.5 Fire Pre-plans
- 10.6 Drills and Exercises

11.0 Incident Reporting and Investigation

- 11.1 Incident Reporting Requirements - Roughneck
- 11.2 Incident Investigation Guidelines and Reports - Roughneck
- 11.3 Management of Work Injuries – Modified Work Program

12.0 Recognition Awards Program

NEWALTA		
<i>Prepared by:</i> <i>D. Whelan/B. Locke</i>	<i>Risk Management Manual</i>	<i>Issued: 1999</i>
		<i>Rev # 3.0</i>
<i>Approved by: D. Pippard</i>	<i>Table of Contents</i>	<i>Rev Date: October 2009</i>
	<i>Page v</i>	

APPENDICES

- Appendix 1 Safe Work Practices and Procedures and General Rules
- Appendix 2 Newalta Filing Protocol
- Appendix 3 EHS Training Curriculum Guide
- Appendix 4 Discrimination, Harassment and Workplace Violence
- Appendix 5 Transportation Manual
- Appendix 6 On-site services manual - Table of Contents

APPENDIX 6

Emergency Response Plan (ERP)
Table of Contents

TABLE OF CONTENTS

AMENDMENT PAGE.....1

1.0 PURPOSE AND SCOPE.....1

2.0 SITE DESCRIPTION AND DIAGRAM.....2

2 SITE PLAN DESCRIPTION.....2

3 EXTERIOR SITE DESCRIPTION.....3

4 INTERIOR SITE PLAN DIAGRAM.....4

3.0 NOTIFICATION AND ALERTING PROCEDURES.....5

3.1 SPILL6

LEVEL 1: LESS THAN 1 DRUM.....6

LEVEL 2: GREATER THAN 1 DRUM BUT LESS THAN 4 DRUMS.....7

LEVEL 3: MORE THAN 4 DRUMS OR CLASS 2, 4.3, 5 OR NORM.....8

3.2 FIRE12

LEVEL 1: ONE OR MORE DRUMS ON FIRE12

LEVEL 2 POLYCHLORINATED BYPHENALS (PCBS)14

LEVEL 3: EXPLOSION HAZARD16

3.3. PERSONAL INJURY17

LEVEL 1 MINOR OR NON-CHEMICAL RELATED INJURIES.....17

LEVEL 2 CHEMICAL RELATED INJURIES OR MAJOR INJURIES.....18

LEVEL 3 MULTIPLE CAUSALITIES20

4.0 RESPONSIBILITIES OF THE ON SCENE COMMANDER.....21

6.0 SPILL CONTROL AND REMEDIATION PROCEDURES22

6.0 FALL PROTECTION RESCUE PLAN.....23

APPENDIX A RESOURCE INVENTORY.....24

APPENDIX B EQUIPMENT INVENTORY.....25

APPENDIX C COMMUNICATIONS26

APPENDIX D EMERGENCY COMMUNICATIONS SCHEDULE27

APPENDIX E EMERGENCY RESPONDERS AND RESPONSIBILITY.....28

APPENDIX F SECONDARY RESPONDERS, CONSULTANTS AND ADVISORS29

APPENDIX G EMERGENCY SERVICE PROVIDERS TELEPHONE LISTINGS..... 30

APPENDIX H EVACUATION PROCEDURES..... 31

APPENDIX I NEWALTA EMPLOYEE LISTING 32

APPENDIX J DISTRIBUTION LIST 33

APPENDIX K RESIDENT BUSINESS LISTING..... 34

APPENDIX L RESIDENT BUSINESS HANDOUT 35

APPENDIX M INCIDENT REPORT SHEET 36

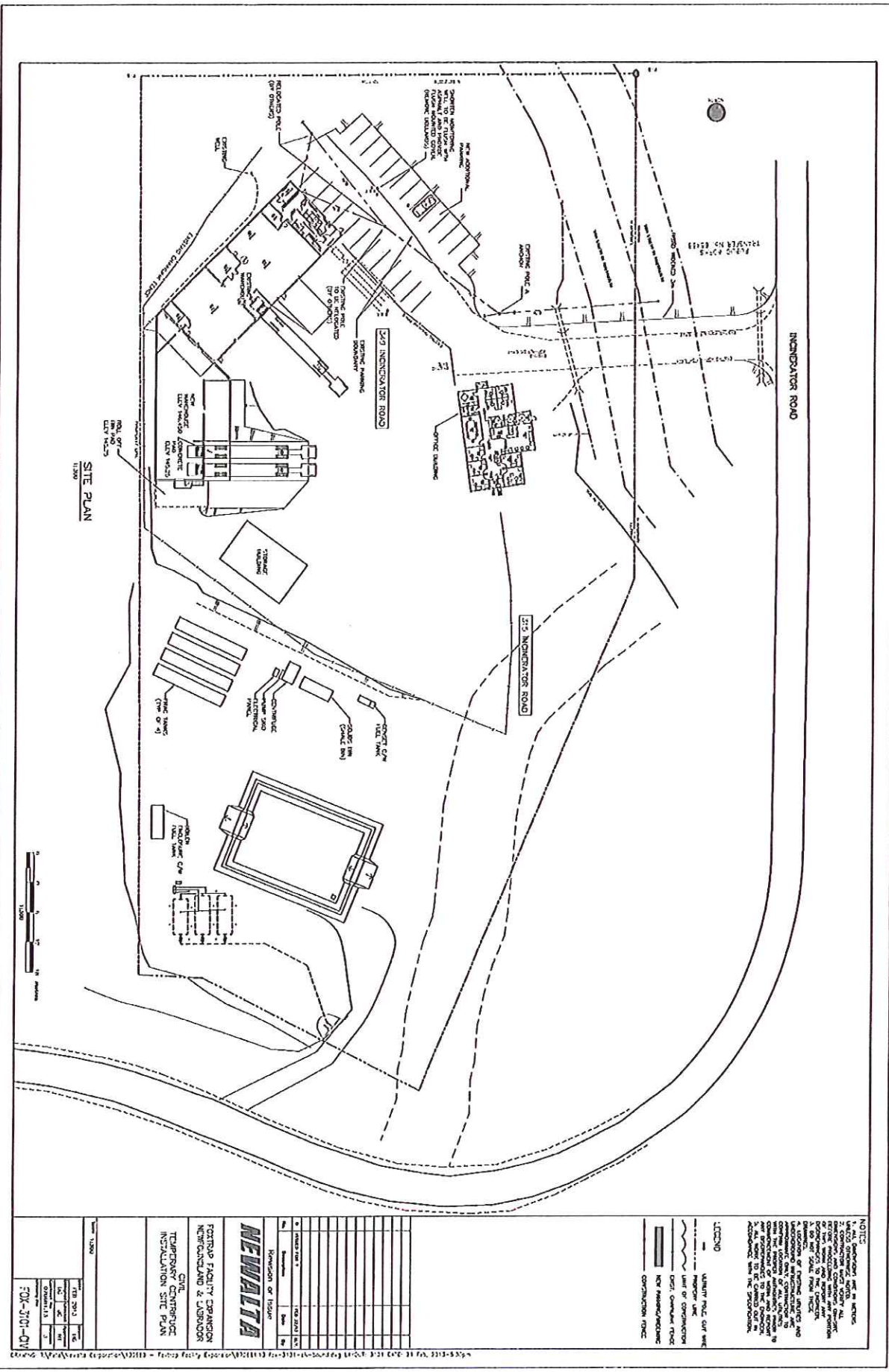
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Newalta Corporation – Foxtrap Branch

APPENDIX 7

Site Plan /
Equipment Layout

Figure 3



APPENDIX 8

Property Survey

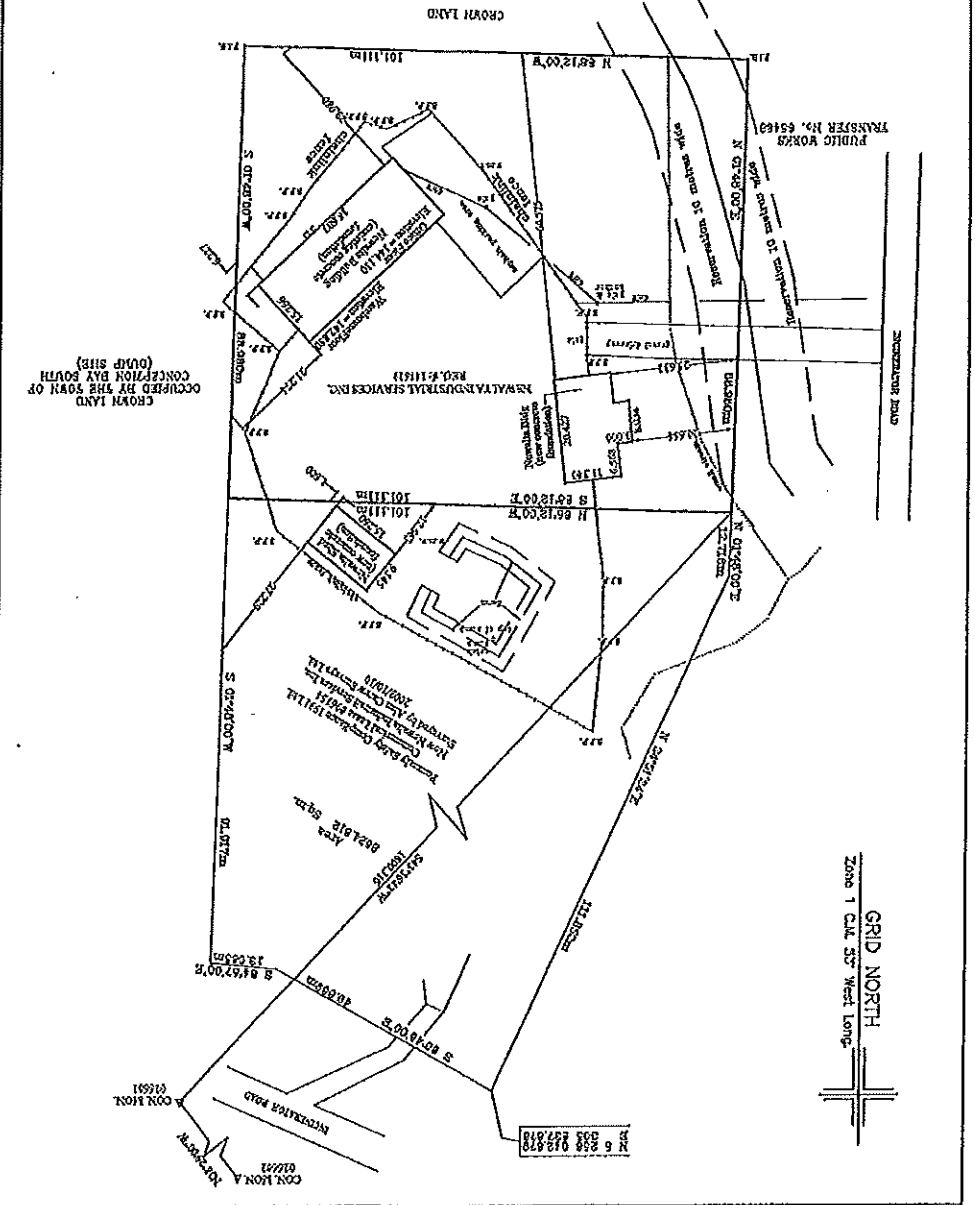
Real Property Report
Newalta Industrial Services Inc.
 C/O # 349 Inchinor Road, Foxtrap, C.B.S., Newfoundland and Labrador

ALAN CARBW SURVEYS LTD.
 Newfoundland Land Surveyors
 76 BRITTANY DRIVE
 PARADISE, N.L. A1L 2V1
 TEL/FAX (709) 781-0200
 CELL 685-5348
 email: acs@alrogers.com

LEGEND:
 F.P. — FENCE LINE
 F.P. — FENCE POST
 O — POLE
 O.H.W. — OVERHEAD WIRE
 G.W. — GUY WIRE
 C.A.P. — CABLE TIE
 E.S.P. — ELECTRICAL SERVICE
 C.M. — CONCRETE WALL

NOTE: - This plan certifies the information as of the date shown and only as of that date. All distances are in feet. This document is provided by Alan Carbow Surveys, 2009. It is not to be used for any other purpose. Any use of this document is prohibited by law as defined in the "Copyright Act". The accuracy of this report is not guaranteed. For further information contact the office at the phone number listed below.

NOTE: Elevation Top of New Concrete Foundation (Building) = 143.195
 Elevation Top of Concrete Foundation (Shed) = 142.264



MONUMENTS USED FOR CONTROL
 (C.M. 51 DECKERS) (MADSS) (ORS)
 028693 N 8269 181.270 E 205 019.185
 Combined Scale Factor = 0.99973

