Deloitte.

# Sale of Assets

# Renova Scotia Bioenergy Inc.

(located in Brooklyn, Nova Scotia)

**Invitation for Offers Issue Date: October 31, 2013**

**Responses must be received no later than November 28, 2013 at the office of:**

**Deloitte Restructuring Inc.**
**Purdy's Wharf Tower II**
**1969 Upper Water Street, Suite 1500**
**Halifax, Nova Scotia  B3J 3R7  Canada**

**Facsimile bids will not be accepted for the Invitation for Offers**

# Title and Disclaimer

The purpose of this Invitation for Offers (the "Invitation") is to provide a description of certain assets offered for sale by Renova Scotia Bioenergy Inc. ("Renova"). Deloitte Restructuring Inc. ("Deloitte") is engaged as Agent of Renova and the Province of Nova Scotia.

The information contained in this Invitation is based upon information provided by Renova and is intended solely for use by prospective purchasers of the assets described herein.

This Invitation is not all-inclusive and does not contain all the information that a prospective purchaser may require. While the information contained herein is believed to be accurate and reliable, Deloitte does not make any representations or warranties, expressed or implied, as to the accuracy or completeness of such information or any other written or oral communication by Renova, Deloitte or any of Renova's other advisors or agents. Prospective purchasers should, in accordance with the procedures set forth under this Invitation, conduct their own investigation and analysis and form their own judgment of the information and assets described herein.

Deloitte, at its sole discretion, reserves the right at any time to withdraw any or all of the assets and services from the Invitation, terminate the Invitation or alter, add or waive terms and conditions as it deems necessary.

No securities commission or regulatory authority in Canada or in any other country has in any way passed on the merits of this document or the accuracy or adequacy of this Invitation. This Invitation does not constitute an offer or solicitation in any jurisdiction to any person to whom it is unlawful to make such an offer or solicitation. This Invitation is not, and under no circumstances, is to be construed as a prospectus, a public offering, or an offering memorandum as defined under applicable securities legislation.

All inquiries should be made to:

**Deloitte Restructuring Inc.**
Purdy's Wharf Tower II
1969 Upper Water Street, Suite 1500
Halifax, Nova Scotia  B3J 3R7  Canada

**Neil Jones, CA, CIRP**
Vice President
Telephone: (902) 721-5597
Email: neiljones@deloitte.ca

**James Foran, CA, CIRP**
Vice President
Telephone: (902) 721-5614
Email: jforan@deloitte.ca

# Table of Contents

# 1. Introduction

## 1.1 Terminology

The following terms are used throughout this Invitation for Offers (the "Invitation"):

"Agreement of Purchase and Sale" shall be the agreement between Renova and the Purchaser, according to the Terms and Conditions attached as Appendix A, upon acceptance by Renova of an offer to purchase assets.

"Asset Sales Process" is the process by which Deloitte is issuing this Invitation, soliciting prospective purchasers to submit offers for the purchase of the assets of Renova. The Asset Sale Process will be managed in accordance with the Terms and Conditions.

"Bidder" is a prospective purchaser, or consortium of prospective purchasers, responding to this Invitation.

"Day", unless otherwise specified, means a calendar day.

"Deloitte" is Deloitte Restructuring Inc., agent to Renova and the Province and does not act in its personal capacity.

"Form of Offer" is the binding offer to purchase assets which prospective purchasers are invited to submit in the form attached as Appendix B.

"NSLI" is Nova Scotia Lands Inc., a Crown Corporation of the Province with the mandate to remediate, redevelop and manage properties owned by the Province. NSLI is a contractor of Renova with respect to the Project Site.

"Province" is the Province of Nova Scotia.

"Purchaser" is a successful proponent of the sale of all or certain of Renova's assets upon acceptance of a Bidder's Form of Offer by Renova.

"Project Site" refers to former site of Bowater Mersey Paper Mill in Brooklyn, Queens Municipality in Nova Scotia, south of Trunk Highway No. 3.

"Renova" is Renova Scotia Bioenergy Inc., formerly Bowater Mersey Paper Company Limited, which was purchased by the Province on December 10, 2012.

"Terms and Conditions" are the terms and conditions of the Invitation attached as Appendix A.

Any capitalized term used in this Invitation that is not defined in this Invitation, but which is defined in the Agreement of Purchase and Sale, shall have the meaning ascribed to it in the Agreement of Purchase and Sale.

## 1.2 Invitation

This Invitation provides Bidders with information to enable them to prepare and submit an offer for consideration by Deloitte on behalf of Renova.

Attachments to this Invitation contain supporting information as follows:

**Appendix A Terms and Conditions**
**Appendix B Form of Offer**
**Appendix C Summary of Asset Parcels Offered**
**Appendix D Health and Safety Program**

## 1.3 Information Meeting

An information meeting will be held at the premises of Renova in Brooklyn, Nova Scotia on November 13, 2013 at 14:00 Atlantic Standard Time. Security at the main gate will provide direction to the information meeting room. The information meeting will consist of a presentation by Deloitte and NSLI.

Bidders will have the opportunity to ask questions (See Section 3.7) at the end of the presentation. Questions will be recorded and may be responded to at the information meeting, at a later date in the form of an addendum to this Invitation or, may not be responded to if deemed not relevant to the Asset Sales Process. Deloitte and NSLI have procedures in place for query handling.

## 1.4 Background

Renova (at the time known as Bowater Mersey Paper Company Limited) operated as a forestry company in the Province from 1929 until June 2012. Its primary operations were the production of newsprint through a pulp and paper mill located in Brooklyn, Nova Scotia. Annual production in 2011 was approximately 253,000 tons of newsprint.

Since December 10, 2012, Renova has been owned by the Province, which is in the process of decommissioning assets at the Project Site. Deloitte, as agent of Renova and the Province, is overseeing this asset transition process.

## 1.5 NSLI

As a contractor of Renova, NSLI will be assisting with the Asset Sales Process within its role of oversight of the Project Site, managing remediation, rehabilitation and redevelopment activities.

## 1.6 Summary of Significant Dates

Deloitte is soliciting offers from prospective purchasers of the assets of Renova. Deloitte intends to review and evaluate offers and plans to enter into Agreement(s) of Purchase and Sale with the Purchaser(s) on or about December 5, 2013.

Purchasers shall remit the balance of the purchase price prior to commencing work to remove purchased assets from the Project Site. Purchasers shall include in the Form of Offer a proposed date for the removal of all purchased assets or a detailed description of a process for removal of purchased assets with an estimated date for final removal. Timely removal of purchased assets will receive favourable consideration upon evaluation of offers.

## 1.7 Existing Reference Documents

For the information of Bidders, Deloitte has a summary of asset parcels offered in this Invitation as per Appendix C. This document may be reviewed, at the Bidder's discretion, for background information only and do not form part of the Form of Offer.

## 1.8 Concurrent Request for Proposals – Demolition and Scrap Processing

Deloitte also issued a request for proposals for demolition and scrap processing services on the Project Site on October 31, 2013. For the purpose of clarity, Deloitte will consider consolidated offers for the sale of Renova's assets under this Invitation and the demolition and scrap processing services described in the request for proposals.

## 1.9 Contacts

Renova's primary contacts for this Invitation are as follows:

**Deloitte:**

Neil Jones, CA, CIRP
Vice President
Deloitte Restructuring Inc.
c/o Renova Scotia Bioenergy Inc.
Purdy's Wharf Tower II
1969 Upper Water Street, Suite 1500
Halifax, Nova Scotia B3J 3R7 Canada
Email: neiljones@deloitte.ca
Telephone: ( 902) 721-5597

James Foran, CA, CIRP
Vice President
Deloitte Restructuring Inc.
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Purdy's Wharf Tower II
1969 Upper Water Street, Suite 1500
Halifax, Nova Scotia B3J 3R7 Canada
Email: jforan@deloitte.ca
Telephone: (902) 721-5614

**NSLI:**

Timothy Crowe
Site Coordinator
Nova Scotia Lands Inc.
c/o Renova Scotia Bioenergy Inc.
3691 Highway Trunk 3
Brooklyn, Nova Scotia B0J 1H0 Canada
Email: tim.crowe@merseymill.ca
Telephone: (902) 354-8614

Joel MacLean
Chief Operating Officer
Nova Scotia Lands Inc.
c/o Renova Scotia Bioenergy Inc.
P.O. Box 430, Station A
Sydney, Nova Scotia B1P 6H2 Canada
Email:macleajp@gov.ns.ca
Telephone: (902) 564-7959

# 2. Asset Sales Process

## 2.1 Asset Sales Process

Deloitte intends to make this Invitation available to all interested parties. Prospective purchasers are invited to submit an offer for the purchase of the assets as described in this Invitation.

The Asset Sales Process will be managed in accordance with the Terms and Conditions established by Deloitte, as per Appendix A. Deloitte retains the right at any time to terminate or alter the Invitation and the Terms and Conditions without compensation to any party.

## 2.2 Offers to Purchase

Prospective purchasers are asked to submit a binding offer to purchase in the attached Form of Offers, as per Appendix B, to the office of Deloitte at the address noted on the Form of Offer on or before 16:00 Atlantic Standard Time on November 28, 2013. The binding Form of Offer to purchase assets should include the following details:

- The purchase price and any conditions to the Form of Offer, based on the attached Terms and Conditions
- A certified cheque, bank draft or money order for the lesser of 10% of the purchase price or $1 million CDN
- The names of the financial and legal advisors and other key consultants retained by the prospective purchaser, if any, in connection with the proposed transaction

Deloitte will review all offers to purchase and select the successful proponent(s). Deloitte intends to select offers considered to be the most favourable in terms of meeting Renova's objectives.

## 2.3 Asset Parcels

Assets offered for sale in the Invitation have been grouped into the following parcels:

Parcel I – Chip Handling Equipment

Parcel 2 – Thermal Mechanical Processing Equipment

Parcel 3 – Effluent Treatment Equipment

Parcel 4 – Paper Machine Equipment

Parcel 5 – Miscellaneous Equipment

Parcel 6 – Stores Inventory

A detailed summary of each asset parcel is attached as per Appendix C. Due to the number of assets being offered in parcel's 5 and 6, a complete asset listing is not attached to this Invitation. Prospective purchasers and encouraged to view listings of parcel's 5 and 6 provided on the Nova Scotia Department of Economic and Rural Development and Tourism's Procurement Services website at www.gov.ns.ca/tenders/default.aspx, or Deloitte's website at www.deloitte.com/ca/renova.

Bulk offers for one or more of the above parcels will be considered. Offers for a specific asset, or group of assets, within a parcel will also be considered. If an offer is for less than an entire parcel, the prospective purchaser shall submit an appendix to the Form of Offer clearly identifying the asset or group of assets, and the offer price for each asset or group of assets.

# 3. Offer Submission Details

## 3.1 Signature Pages

The Bidder will sign the Form of Offer and indicate that any or all Addenda have been received. The form of the signature page is given in Appendix B, as part of the Form of Offer.

## 3.2 Date and Time

Offers will be received by Deloitte at the address below up until 16:00 hours Atlantic Standard Time, November 28, 2013.

## 3.3 Address

Offers must be delivered to:

Deloitte: Deloitte Restructuring Inc.
c/o Renova Scotia Bioenergy Inc.
Purdy's Wharf Tower II
1969 Upper Water Street, Suite 1500
Halifax, Nova Scotia B3J 3R7 Canada
Attention: Neil Jones, CA, CIRP

## 3.4 Packaging

The offer must be submitted in a sealed envelope. All offers must bear the name and address of the Bidder, marked "Confidential", and labeled "INVITATION FOR OFFERS, RENOVA SCOTIA BIOENERGY INC."

The offer must be signed by an official authorized to bind the Bidder to its provisions. The offer should remain valid and open to acceptance for sixty (60) days from the date of submission.

## 3.5 Disqualification of Offers

Under no circumstances will offers be considered that:

1. Are received later than the date and time stipulated
2. Are not submitted in a sealed and properly marked envelope
3. Are not signed (Appendix B) by the authorized company official
4. Are not signed to acknowledge receipt of Addenda (Appendix B)

## 3.6 Examination of Assets

Bidders shall satisfy themselves, by personal examination or otherwise, as to the condition of the assets being offered, the Project Site and its surroundings, access to the Project Site, and the general and local conditions relating to labour, law, regulations, transportation, communications, utilities, weather and all other matters that may affect their offer.

No plea for ignorance of conditions that exist or that may have been reasonably expected to exist, or of conditions or difficulties that may be encountered in the execution of an Agreement of Purchase and Sale, subsequent to the acceptance of an offer by Renova.

Upon request, NSLI will arrange access to the Project Site for such examinations, inspections, investigations, explorations, studies, etc., as a Bidder deems necessary for offer preparation. Arrangements to make such visits may be made by contacting:

Timothy Crowe
Site Coordinator
Nova Scotia Lands Inc.
c/o Renova Scotia Bioenergy Inc.
3691 Highway Trunk 3
Brooklyn, Nova Scotia B0J 1H0 Canada
Email: tim.crowe@merseymill.ca
Telephone: (902) 354-8614

## 3.7 Questions, Interpretations, Addenda and Discussion

Questions on the Invitation must be submitted to Deloitte, in writing or email only. They should be received at least seven (7) days prior to the submission deadline. Questions received after that time may not be answered prior to the submission time. Deloitte will determine if questions require a response and such response may be in the form of an addendum to this Invitation.

Only addenda will modify the Invitation. No oral interpretation made to Bidders as to the meaning of the Invitation documents will be effective in modifying any Invitation provisions. Addenda will form an integral part of the Invitation and Bidders are required to confirm in the Form of Offer that they received each addendum and included its provisions in their offer.

All inquiries regarding this Invitation are to be directed, in writing or email only, to:

Neil Jones, CA, CIRP
Vice President
Deloitte Restructuring Inc.
c/o Renova Scotia Bioenergy Inc.
Purdy's Wharf Tower II
1969 Upper Water Street, Suite 1500
Halifax, Nova Scotia B3J 3R7 Canada
Email: neiljones@deloitte.ca
Telephone: (902) 721-5597

James Foran, CA, CIRP
Vice President
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c/o Renova Scotia Bioenergy Inc.
Purdy's Wharf Tower II
1969 Upper Water Street, Suite 1500
Halifax, Nova Scotia B3J 3R7 Canada
Email: jforan@deloitte.ca
Telephone: (902) 721-5614

Failure to comply with the provisions of this subsection may constitute grounds for disqualification of an offer.

## 3.8 Offer Submission Costs

Deloitte, NSLI, Renova, and the Province are not liable for any costs incurred by Bidders in preparation of their offers.

Deloitte, NSLI, Renova, and the Province shall not be liable for, and each person responding to this Invitation shall be solely and fully responsible for, all costs associated with the development, preparation, transmittal, and submission of any offer or material in response to this Invitation, including without limitation, the costs of any in-person presentation of offers which Deloitte, NSLI, Renova, and the Province may require, any expenses relating to the deposit and all costs incurred during the selection process and any negotiations.

By submitting an offer, the Bidder expressly waives any claim(s) against Deloitte, NSLI, Renova, and the Province for any compensation of any kind whatsoever as a result of participating in this Invitation, including without limitation any claim for costs of offer preparation or participation in negotiations whether based in contract including fundamental breach, tort, breach of any duty, including but not limited to, breach of the duty of fairness, breach of the obligation to only accept non-compliant offers, or any other cause of action whatsoever.

Deloitte, NSLI, Renova, and the Province shall not at any time be held responsible if the prospective purchasers estimated value of an asset is found to be inaccurate.

By submitting an offer, the Bidder indemnifies and saves Deloitte, NSLI, Renova, and the Province and its employees, agents, and affiliates harmless from any breach of the Invitation.

## 3.9 Amendments to the Form of Offer

Bidders are referred to the Form of Offer in Appendix B. Any amendments by prospective purchasers to the Form of Offer must be in the form of an appendix to the Form of Offer.

# 4. Evaluation of Offers

## 4.1 Evaluation of Offers

Offers will be reviewed and evaluated by Deloitte. Deloitte will recommend the offer(s) that it determines to be the most advantageous to Renova, after considering all of the evaluation factors.

## 4.2 Reservations

Deloitte reserves the right to accept or reject any or all offers. Deloitte, representing Renova, may but is not required to consider some or all of the following criteria in evaluating an offer:

- The purchase price stipulated in an offer (Deloitte expressly reserves the right to select any offer, including but not limited to the highest price offered, or not to select any offer at all)
- Any conditions to the offer submitted
- The completeness of the offer submitted
- The financial health and creditworthiness of the prospective purchaser
- Any other factors or criteria that Deloitte may deem in its sole and absolute discretion to be relevant or pertinent for its evaluation of the offer

## 4.3 Discussions with Top Ranked Bidder

Discussions will be based entirely on the submitted offer. Typically they will include points of clarification on price, details of any conditions, or items of detail that could not be addressed prior to the existence of the offer.

The designation of a top ranked Bidder for an asset does not commit Deloitte to accepting a Form of Offer. Acceptance of an offer is contingent upon the completion of discussions to the satisfaction of both Deloitte and the Bidder.

Deloitte reserves the right to reject any or all offers. The Bidder offering the highest price may not necessarily be accepted.

## 4.4 Notification of Results

Following selection of a Form of Offer(s), Deloitte will advise all other Bidders in writing of the decision. Upon award, Deloitte will make itself available for debriefings to unsuccessful Bidders.

# Appendix A – Terms and Conditions

# Terms and Conditions

## Terms and Conditions of Asset Sale Process

1. The Vendor is Renova Scotia Bioenergy Inc. ("Vendor"), the owner of the assets located at the former Bowater Mersey Paper Company Limited site.

2. A prospective purchaser (“Prospective Purchaser”) is a bidder, or consortium of bidders, responding to this Invitation for Offers.

3. The Assets being offered for Sale, pursuant to these Terms and Conditions, consist of the Vendor's interest in the assets as described in the Invitation for Offers (“Invitation”).

4. Offers marked "INVITATION FOR OFFERS – RENOVA SCOTIA BIOENERGY INC." addressed to Deloitte Restructuring Inc., c/o Renova Scotia Bioenergy Inc., Purdy’s Wharf Tower II, 1969 Upper Water Street, Halifax, Nova Scotia, B3J 3R7, Canada, Attention: Neil Jones, CA, CIRP, must be received by Deloitte no later than 16:00 Atlantic Standard Time, Thursday, November 28, 2013.

5. Each offer must be accompanied by a certified cheque, bank draft or money order payable to "Renova Scotia Bioenergy Inc.", for an amount equal to the lesser of 10% of the proposed price or $1 million CDN. If an offer is accepted and approved, the cheque, bank draft or money order shall be deemed a cash deposit and the balance of the purchase price shall be paid to the Vendor, at the times and on the terms and conditions herein set out.

6. All offers shall be submitted on the required Form of Offer, which is attached to these Terms and Conditions. Deloitte may reject offers that are not on the required Form of Offer.

7. In consideration of the Vendor making available these Terms and Conditions, other information and the opportunity of inspection and/or in consideration of the Vendor receiving offers, each Prospective Purchaser agrees that its offer is irrevocable and cannot be retracted, withdrawn, varied or countermanded prior to acceptance or rejection thereof.

8. The highest or any offer shall not necessarily be accepted. Preference will likely be given to en bloc offers.

9. If the Vendor accepts any offer, then such acceptance shall be communicated to the successful Prospective Purchaser within ten (10) business days of the date fixed for the closing of Invitation. Such notice may be by telephone, email, facsimile or other means of recorded telecommunications or by registered mail or delivery. Notice of acceptance shall be deemed effectively given when so delivered, telephoned or sent by facsimile or other means of recorded telecommunication or on date of deposit in a post office if mailed by registered mail, as the case may be. Upon such acceptance, there shall be an Agreement of Purchase and Sale between the Vendor and the Purchaser on the terms contained in the Form of Offer and these Terms and Conditions, and the acceptance shall be sufficient evidence of such Agreement.

10. Certified cheques, bank drafts, or money orders accompanying offers that are not accepted by the Vendor will be returned, without interest, to the address given in the offer within ten (10) business days of the date fixed for the closing of the Invitation.

11. The balance of the purchase price shall be paid to the Vendor by certified cheque, money order, wire transfer or bank draft upon closing, which closing shall occur on such date mutually agreed between the Vendor and Purchaser. No equipment may be altered or moved until the date in which the entire purchase price has been paid to the Vendor (the “Closing Date”).

12. On the Closing Date, the Purchaser shall be entitled, upon receipt by the Vendor of the Purchase Price, only to such Bills of Sale or Assignments as may be considered necessary by the Vendor to convey the Assets to the Purchaser or the Assignee of the Purchaser provided that the Purchaser shall remain liable under the Agreement of Purchase and Sale, notwithstanding any assignment thereof by the Purchaser. Any such Bills of Sale or Assignments shall contain only a conveyance of the Vendor's interest in the Assets and shall not contain any warranty or covenant other than a covenant that the Vendor has done no act to encumber the Assets.

13. In addition of the Purchase Price for the Assets being purchased, the Purchaser shall pay to the Vendor on the Closing Date all applicable federal, provincial and other taxes unless all necessary Certificates to exempt the Purchaser there from are provided to the Vendor on or before the Closing Date. The Purchaser shall arrange its own insurance and there shall be no adjustment of insurance. The Purchaser shall be responsible for all costs with respect to the obtaining of all Federal, Provincial, civic and other licenses necessary to own and operate any of the Assets.

14. The obligation of the Vendor to sell and the Purchaser to purchase the Assets shall, at the option of the Vendor, terminate in the event that prior to the Closing Date the Assets are substantially destroyed by fire, flood, the elements, Government action, or civil commotion or any other external cause beyond the control of the Vendor. Such option to terminate by the Vendor shall be exercised by giving notice in writing to the Purchaser that it intends to take the proceeds, if any, payable under any existing insurance policies and terminate the Agreement of Purchase and Sale. In such an event, the Agreement of Purchase and Sale shall automatically terminate and be deemed null and void and the deposit money shall be returned to the Purchaser without interest, cost, and compensation or deduction and no party shall be liable to another for any costs or damages whatsoever. If the Vendor does not exercise such option, the Purchaser, at his option may perform the Agreement of Purchase and Sale, such option to be exercised in writing, within seven (7) business days after notice to the Purchaser that the Vendor does not intend to exercise its option to terminate. In such event, the Purchaser shall be entitled only to an assignment of any proceeds payable under the existing insurance policies and transfer of any remaining Assets in full settlement of the Vendor's obligations to repair or replace the damaged assets and in full satisfaction of this Agreement of Purchase and Sale. If the Purchaser does not exercise his option, the Agreement of Purchase and Sale shall be automatically terminated and deemed null and void and the deposit money shall be refunded to the Purchaser without interest, costs, compensation or deduction and neither party shall be liable to the other for any costs or damages whatsoever.

15. The Vendor shall remain in possession of the Assets until the Closing Date and completion of the Agreement of Purchase and Sale. Title to the Assets shall not pass to the Purchaser, nor shall the Purchaser be entitled to possession of same, until the purchase price and all other payments to be made by the Purchaser pursuant to the Agreement of Purchase and Sale have been paid in full.

16. If, on or before closing, it is found that there are property claims, encumbrances, title defects or charges with respect to any of the Assets being offered for sale which the Purchaser has not agreed to waive or assume in addition to, or as part of his offer, and which the Vendor is not willing to discharge, then, subject to the Vendor's consent, the offer may be reduced by the Purchaser by the amount of the value of the claimed or encumbered assets (calculated by prorating the value of the encumbered assets based on the actual proposed price) or the Vendor at its own option may rescind the agreement to sell the assets in question and the Purchaser shall be entitled solely to the return of the cash deposit without interest and without any other compensation of any kind or nature whatsoever for any loss, damages or other costs.

17. The Purchaser shall remove all assets pursuant to the schedule and plan attached to the Form of Offer.

18. The Purchaser shall remove the Assets being purchased at its sole cost and shall remedy any damage to the Vendor's premises caused by such removal. The Purchaser shall indemnify and save the Vendor harmless for any loss, claims, actions, damages, costs, liability and expense in connection with loss of life, personal injury, damage to property, or any other loss or injury arising out of or related to the Purchaser's removal of the Assets being purchased and the Purchaser's occupation of the Vendor's premises required for such removal.

19. If the Purchaser fails to comply with these Terms and Conditions, the deposit shall be forfeited to the Vendor on account of liquidated damages and the Assets may be resold by the Vendor in such manner and on such terms as the Vendor in its sole discretion determines, and the Purchaser shall pay to the Vendor (i) an amount equal to the amount, if any, by which the Purchase Price under the Agreement of Purchase and Sale exceeds the net purchase price received by the Vendor pursuant to such resale, and (ii) an amount equal to all costs and expenses incurred by the Vendor in respect of or occasioned by the Purchaser's failure to comply with the Agreement of Purchase and Sale.

20. By submitting an offer, the Purchaser acknowledges that it has inspected the Assets and that the Assets are sold on an "as is, where is" basis at the time of closing and that no representation, warranty or condition is expressed or implied as to title, description, environmental conditions, fitness for purpose, merchantability, quantity, condition, cost, or quality thereof, or in respect of any other matter or thing whatsoever. Without limitation the Assets are specifically offered as they exist on closing and with no adjustments to be allowed the Purchaser for changes in conditions, qualities or quantities of the Assets from the date hereof to the Closing Date, except as specifically provided for in the Terms and Conditions. Each Purchaser acknowledges that the Vendor is not required to inspect or count, or provide any inspection or counting of the Assets.

21. Nova Scotia Lands Inc. ("NSLI") and the Vendor have in place a Health and Safety Program (attached as Appendix D to the Invitation), which outlines the requirements and responsibilities for ensuring and maintaining safe working conditions on the Project Site. Failure to coordinate access with NSLI or failure to obey the direction of NSLI while on the Project Site will result in immediate removal from the Project Site and may result in disqualification from the Assets Sales Process. It is the responsibility of the Purchaser to remove all assets by a date agreed to between the Vendor and the Purchaser. Depending on the extent of work required to remove purchased assets, the Vendor may require the Purchaser to develop an Assignment Health and Safety Plan as required under Health and Safety Program. Prior to the removal of assets, the Purchaser shall provide a letter of Good Standing from the Nova Scotia Construction Safety Association (or equivalent), and the Workers Compensation Board of Nova Scotia, if applicable. Purchasers who disregard the Health and Safety Program or other established health and safety policies, plans, procedures or protocols, will be removed from the Project Site.

22. The Vendor has placed in force for the duration of the demolition, remediation, decommissioning and redevelopment of lands located at or near 3691 Highway Trunk 3, Brooklyn, Nova Scotia, an Owner Controlled Insurance Program in respect to Contractor's Pollution Liability (CPO) and General Operational liability. Depending on the extent of work required to remove purchased assets, the Vendor may require the Purchaser to adhere to the Vendor's insurance requirements as follows. The Vendor shall add as named insured's the successful respondents and provide the Contractors Pollution Liability (CPO) and General Liability Protection programs subject to the term conditions and limits of liability defined in the insurance documents. The Vendor ensures the issuance of such insurance protection programs by financially sound insurers licensed to carry on business in Canada and are subject to approval by the Province of Nova Scotia. All policies are non-cancellable, except for termination or indefinitely postponement of the assignment or violation of statutory law which places the insurer in violation of the law or its place of domicile or threaten solvency. Certificate of insurance or other forms of documentation acceptable in form and content shall be supplied to the contractors who become named insured's within the protection programs once established as the successful respondent. All insurances shall provide coverage and shall protect the Province, the Vendor, NSLI, Deloitte, the successful respondents, and their successor and assigns their respective officers, employees, agents and servants involved in the removal of purchased assets from the Vendor's premises. Contactor's Pollution Liability (CPO) is underwritten by AIG. General Operational Liability is underwritten by Northbridge Financial Corporation. Certified copies of all Assignment insurance policies, or other forms of documentation acceptable in form and content to the Province,

the Vendor, NSLI, and Deloitte, shall be delivered to the Province, the Vendor, NSLI, and Deloitte prior to signing of the Contract. Insurances to be maintained during the removal of purchased assets are as follows:

Contactors Equipment Insurance

Contractors Equipment Insurance insuring the machinery, equipment and other property of the Purchaser and its subcontractors while at the Project Site. Coverage shall be at replacement cost value and no co-insurance will be permitted. This insurance policy will include the following provisions:

- Policy limit of liability of $5 million per occurrence;
- Annual aggregate limits permitted for earthquake coverage and flood coverage, separately; no other policy aggregates permitted;
- Maximum deductible of $10,000 per occurrence and/or 2% of equipment value;
- 90 days prior written notice of cancellation or material change from insurer to the Province;
- Waiver of insurer's rights of subrogation against the Province; and,
- Breach of any of the terms or conditions of the policy, or any negligence or willful act or omission or false representation by an insured or any other person, shall not invalidate the insurance with respect to the Province.

Automobile Liability Insurance

Automobile Liability Insurance insuring all licensed vehicles owned, leased or operated by the Purchaser and its subcontractors while the Vendor's premises. The Purchaser must ensure that evidence of comparable coverage is provided by all subcontractors and workmen or tradesmen working at the site. This insurance policy will include a limit of liability of $3 million per occurrence.

23. Deloitte acts in its capacity as Agent of Renova Scotia Bioenergy Inc. and shall have no personal or corporate liability hereunder or from any Agreement of Purchase and Sale contemplated hereby or as a result of any sale contemplated hereby.

24. In the event that some of the offers submitted are substantially in the same terms and/or amounts, the Vendor may in its sole discretion call upon those Prospective Purchasers to submit further offers.

25. The Terms and Conditions contained herein shall not merge on closing, but shall survive such closing and remain in full force and effect and be binding on the Purchaser thereafter.

26. In the event that disruption occurs with respect to the Canadian or other postal service, all notices contemplated by these Terms and Conditions may be forwarded by telegram or facsimile.

27. The validity and interpretation of these Terms and Conditions, and of each provision and part thereof, and of any Agreement of Purchase and Sale defined herein, shall be governed by the laws of Nova Scotia and the Courts of the Province of Nova Scotia shall have exclusive jurisdiction with respect to any disputes arising out of these Terms and Conditions or any Agreement of Purchase and Sale entered into pursuant to these Terms and Conditions.

28. The Vendor at its own discretion may waive any or all of the Terms and Conditions of Sale herein.

29. If there is any conflict between these conditions and the advertised Invitation to Purchase Assets, the terms contained in these Terms and Conditions shall prevail.

30. The Agreement of Purchase and Sale entered into pursuant to these Terms and Conditions shall endure to the benefit of and be binding upon the parties thereto, and their respective successors and assigns.

31. All stipulations as to time are strictly of the essence.

# Appendix B – Form of Offer

# Form of Offer

## Form of Offer to Purchase Assets of Renova Scotia Bioenergy Inc.

**To:** **Deloitte Restructuring Inc.**
c/o Renova Scotia Bioenergy Inc.
Purdy's Wharf Tower II
1969 Upper Water Street, Suite 1500
Halifax, Nova Scotia B3J 3R7 Canada
Attention: Neil Jones, CA, CIRP

**From:**

_____

(Name of Prospective Purchaser)

_____

(Address, including postal code)

_____

(Telephone)

_____

(Facsimile)

I. I, we, hereby submit this offer for one or more of the following parcels: (The amount shown for each parcel will be considered a separate offer. If an offer is for less than an entire parcel, the Prospective Purchaser shall submit an appendix to the Form of Offer clearing identifying the asset or group of assets, and the offer price for each asset or group of assets.)

Parcel I – Chip Handling Equipment _____

Parcel 2 – Thermal Mechanical Processing Equipment _____

Parcel 3 – Effluent Treatment Equipment _____

Parcel 4 – Paper Machine Equipment _____

Parcel 5 – Miscellaneous Equipment _____

Parcel 6 – Stores Inventory _____

I, we, hereby submit this offer for the bulk purchase of the following parcels: (A bulk offer must indicate the value attributed to each parcel included in the bulk offer.)

Parcel I - Chip Handling Equipment _____

Parcel 2 - Thermal Mechanical Processing Equipment _____

Parcel 3 - Effluent Treatment Equipment _____

Parcel 4 - Paper Machine Equipment _____

Parcel 5 - Miscellaneous Equipment _____

Parcel 6 – Stores Inventory _____

Total Offer to Bulk Purchase _____

II. Enclosed is the cash deposit by way of certified cheque, bank draft or money order in the amount of $_____, representing the lesser of ten per cent (10%) of the total amount proposed or $1 million CDN.

III. I, we, hereby propose to remove all the assets subject to this offer from the Project Site by the following final date: _____; pursuant to the removal plan attached as an appendix to this Form of Offer.

IV. It is acknowledged that this offer is subject to the Terms and Conditions issued by the Vendor per the Invitation and the Prospective Purchaser has received and reviewed all Addenda with respect to the Invitation.

Dated at _____ _____on the day of_____, 2013.

_____
(Name of Prospective Purchaser)

Per: _____

For the information of the Vendor, the attached indicate our proposed counsel for purposes of this transaction (if none identified as yet, please so indicate):

_____ _____
Counsel name Telephone number

_____
Counsel firm name

# Appendix C – Summary of Asset Parcels Offered

# Summary of Asset Parcels Offered

## Parcel 1 - Chip handing equipment

**Chip unloading equipment** – includes an 80 ton hydraulic truck dump, hopper with live chain bottom, belt conveyors, magnet, and scalping screen;

**Conveyors to A-Frame Building**

**80 Ton Hydraulic Truck Dump**

**Chip storage equipment** – includes chip stacker and reclaim, belt conveyors, bucket elevators, chip screen;

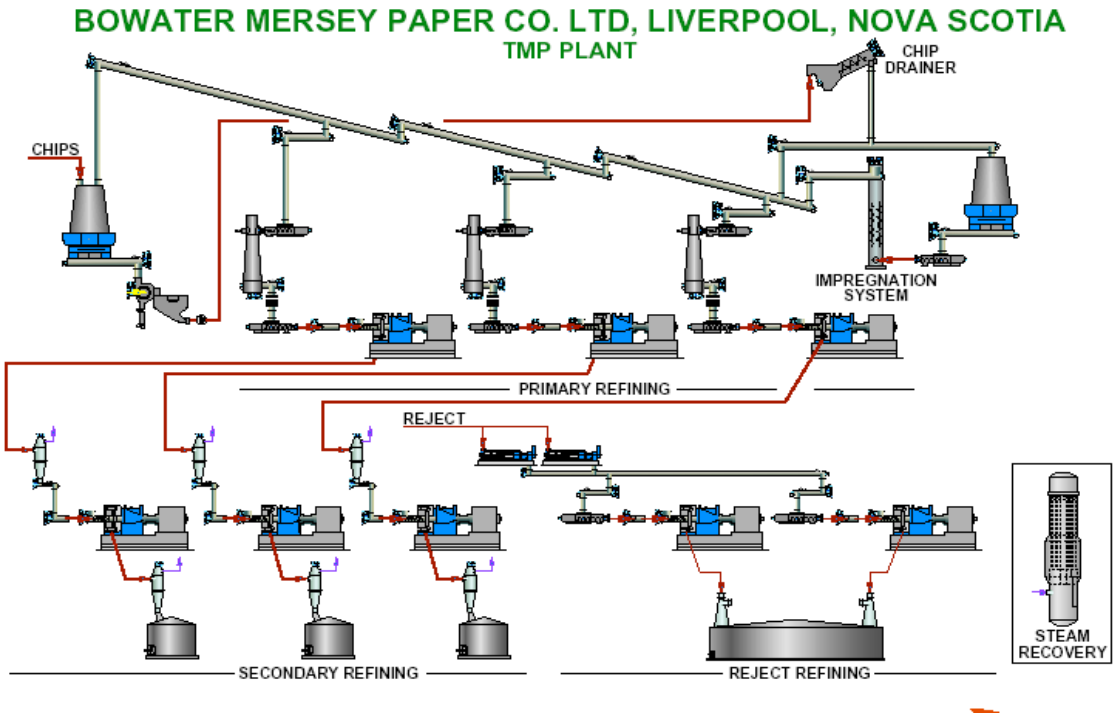
**Chip Stacker and Reclaim**

**Screw Conveyor in A Frame Building**

**Note**: The conveyor system from the A-Frame building to the Thermal Mechanical Processing facility is not included in this Invitation.

## Parcel 2 – Thermal mechanical processing (TMP) equipment

For information purposes, the process flow for the TMP plant is shown below. Note that all of the equipment shown is not included in this Invitation.




**Chip impregnation equipment –** includes the chip impregnator and retention bin.

**Impregnator**

**Chip conveying and preheat equipment** – includes (2) vertical preheaters, (2) preheater discharge metering screws, (2)13.5" diameter plug screw feeders, and (2) sidefeed screw conveyors;

**Mainline refining equipment–** includes (2) primary refiners and motors, (2) secondary refiners and motors;

- Refiner Line 1 - Primary Refiner P1 RGP-70CD, discharge/feed screws, Secondary Refiner S1 RGP-70CD, 22,000 hp motor, secondary cyclone

- Refiner Line 2 - Primary Refiner P2 RGP-70CD, discharge/feed screws, Secondary Refiner S2 RGP-70CD, 22,000 hp motor, secondary cyclone

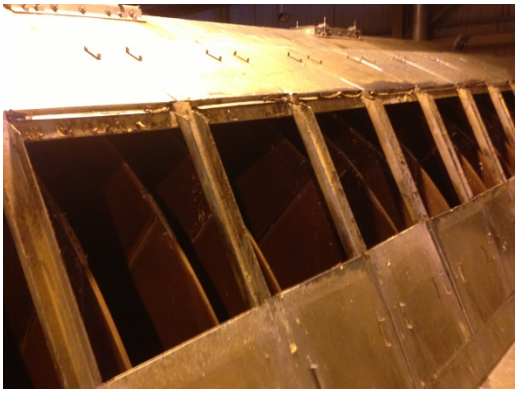
**Steam recovery equipment** – includes Rosenblad re-boiler and associated pumps;

**Refiners and Preheaters**

**Rejects dewatering equipment** – includes (2) drum thickeners and (2) reject presses;

**Reject refining equipment** – includes (2) refiners: Metering screws, plug feeders, ribbon feeders, R1 RGP-70CD refiner, and R2 RGP-70CD refiner;

**Stock process equipment** – includes (2) Dorr Oliver 5-meter disc thickeners and various pumps.

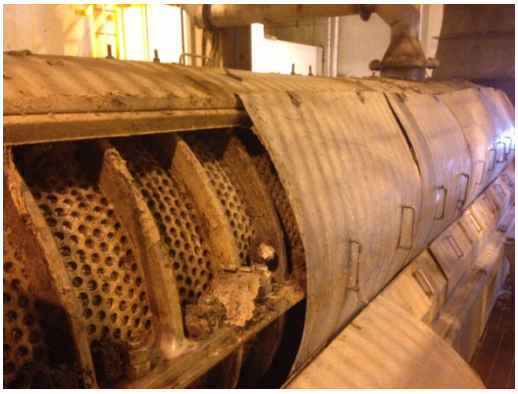


**Disc thickener**

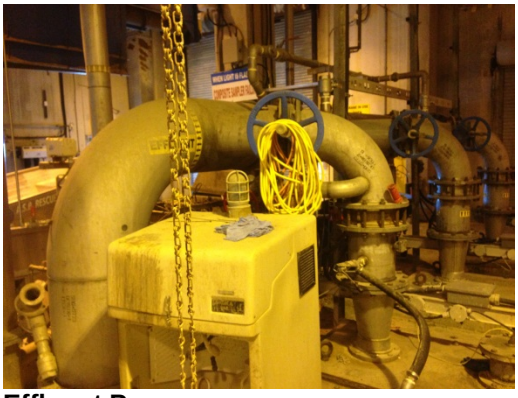
**Pump associated with the process**

## Parcel 3 - Effluent treatment equipment

**Effluent treatment equipment** – includes (2) pre-thickening screens and (2) screw presses, and effluent pumps;



**Screw Press**



**Effluent Pump**

## Parcel 4 – Paper machine equipment

Paper machine equipment includes equipment formerly involved in newsprint manufacturing process, which included twin paper machines that produced standard newsprint or bulky book paper. Specifications for each paper machine are as follows:

- Basis Weights:  42 gsm (grams per square meter) to 56 gsm
- Speed:  1000 mpm (meters per minute) at 45 gsm
- Width: Maximum winder trim of 560 cm / Breast roll width of 585 cm
- Production Capacity: 350 metric tonnes per day at 45 gsm
- Maximum Roll Diameter through Wrapping Station: 127 cm
- Maximum Roll Length through Wrapping Station: 182 cm

The following assets have already been removed from the paper machines:

- Two (2) Metso dilution headboxes complete with dilution screens and pumps
- Twenty Four (24) vacuum pumps
- All core cutting equipment
- Dry end pulper and Guillotine
- Break Review camera system
- Paper quality testing machine (Paper Lab)
- All DC Paper Machine motors greater than 500 Hp, except two (2) motors at 950 Hp

Major equipment available in this Invitation:

**Stock Screens –** includes six (6) Bird stock screens already disassembled;

**Stock Screens**

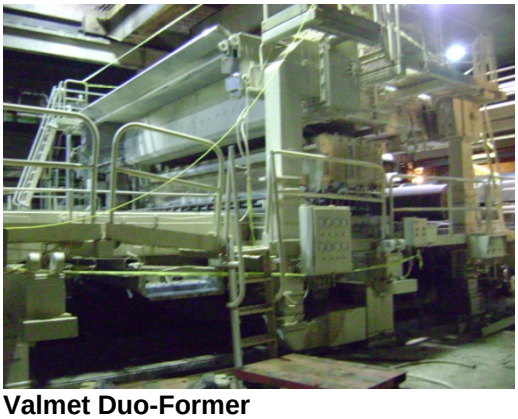
**Deculators** – includes two (2) Bauer Deculators;

**Deculator**

**Cleaners** – includes two (2) racks of Bauer Centrifugal Cleaners;

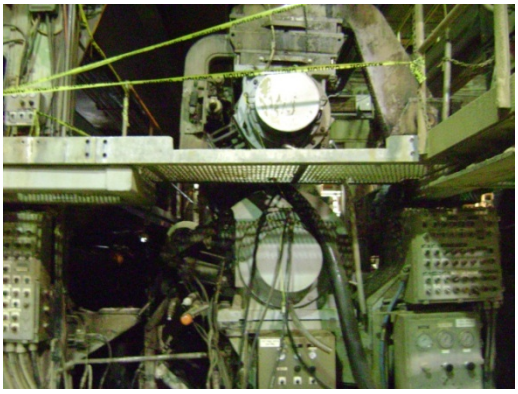
**Bauer Centrifugal Cleaner**

**Formers** – includes two (2) Valmet Duo-Formers;



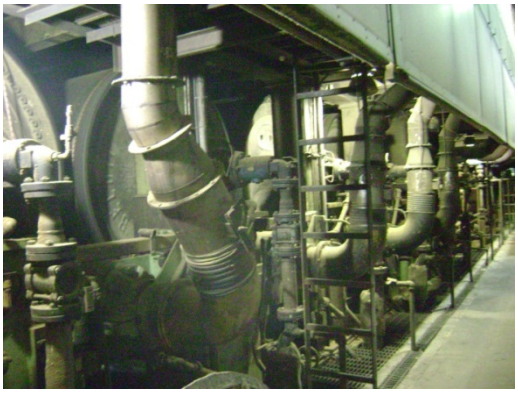
**Valmet Duo-Former**

**Presses** – includes two (2) Beloit 2 nip Ventinip grooved roll presses;



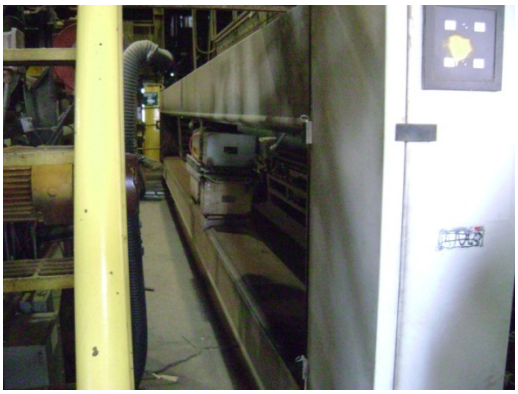
**Beloit 2 nip Ventinip Grooved Roll Press**

**Dryer Sections** – includes ten (10) Section Dryer arrangements (Four Unirun and Six Conventional) and sixty eight (68) Dryer Cans;



**Dryer Section Arrangement**

**Paper Gauging Systems** – includes two (2) Measurex MxOpen Gauging Systems (Installed 1995/1997);



**Measurex MxOpen Gauging System**

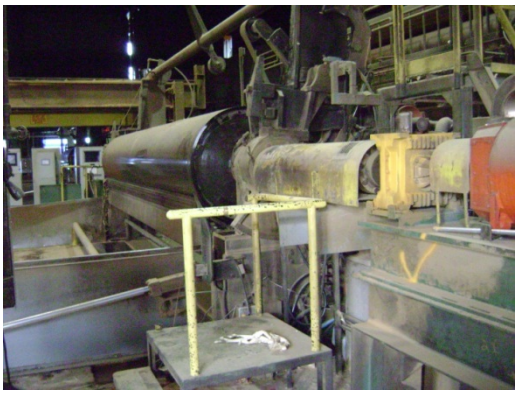
**Hole Detector** – includes one (1) Cognex Hole Detector PM2 (circa 2005);

**Cognex Hole Detector**

**Calendar Stacks** – includes two (2) 6-Roll steel Calendar Stacks;

**6-Roll Calendar Stack**

**Paper Reels** – includes two (2) Dominion Primary, Secondary arm design Paper Reels;



**Dominion Paper Reel**

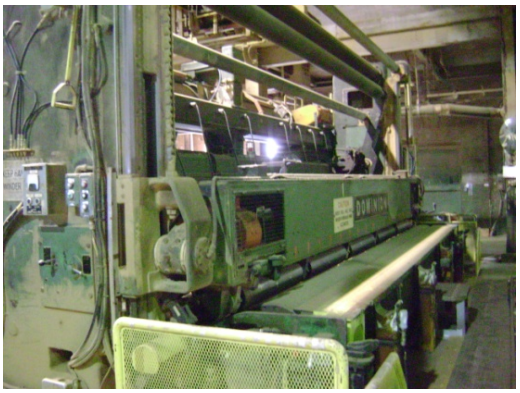
**Reel Spools** – includes fourteen (14) Beloit steel shell Reel Spools;

**Beloit Reel Spools**

**Winder Backstands** – includes two (2) carbon steel Winder Backstands (picture not available);

**Winders** – includes two (2) Dominion 2-drum shafted Winders, Hydraulic lowering table design; Valmet Slitter Section (installed 1991 &1995) and one (1) disassembled Jagenberg Winder;

**Slitters & ABB Operator Control Stations**



**Rider Roll and Front/Rear Drums**

**Save-Alls** – includes two (2) Dorr Oliver stainless steel Save-Alls;


**Drive End**

**22 Rows, 12 Sectors Each Row**

**Roll Wrapping Equipment –** includes Lamb Roll Wrapping System with capacity of 1000 or 1500 packages per day;

- One (1) Lamb steel slat infeed Conveyor
- Eight (8) Lamb Wrapper Stands
- One (1) Lamb Body Wrap Station
- One (1) Lamb Crimper Station
- One (1) Lamb End Cap Station

**Lamb Roll Wrapping System**

**Roll Conveying Equipment** – includes Lamb and Cyvector Roll Conveying equipment;

- One (1) 1962 Lamb steel slat bilge Roll Conveyor – 125 Ft. section
- One (1) 1989 Lamb steel slat bilge Roll Conveyor - 150 Ft. section
- One (1) 1989 Lamb Roll Kicker - infeed side of Lowerator
- One (1) 1989 Lamb Turntable - infeed side of Lowerator
- One (1) 1989 Lamb Lowerator
- One (1) 1989 Lamb Lowerator Kicker - outfeed side of lowerator
- One (1) 1989 Lamb Roll Upender - outfeed side of Lowerator
- One (1) 1989 Lamb Outrun Belt Conveyor - outfeed side of Roll Upender
- One (1) 2007 Cyvector Roll Kicker - infeed side of Upender
- One (1) 2007 Cyvector Upender
- One (1) 2007 Cyvector 2 sections belt conveyor - each 20 feet long (Upender outfeed)
- One (1) 1929 Wood slat Conveyor – 800 Ft. section

**Lamb Steel Slat Bilge Roll Conveyor**

**Lamb Turntable and Lowerator**

**Lamb Kicker and Turn Table**

**Lamb Bumper and Upender**

**Lamb Roll Upender & Discharge Conveyor**

**1929 Wood Slat Conveyor**

**Cyvector Upender**

**Paper Machine Rolls –** identified by the following section/roll types:

**Fourdrinier Section:** includes Breast, 3rd Bottom, Guide, 2nd Bottom, Stretch, 1st Bottom, Couch, and Bottom Wire Turning;

**Bel-Roll Section:** includes Lead In, Stretch, Top Wire Turning, and Positioner;

**First Press Section:** includes Suction Pick Up, Grooved Press, Granite, Interpress Draw, Concave Roll, Hitch, Stretch, and Guide;

**Second Press:** includes Suction Felt, Granite, Nipco, Paper, Inching, Guide, 1st Outside Position, Stretch, and 2nd Outside Position;

**Dryers Section:** includes Felt Grooved Short, Plain Felt Regular, Plain Felt Short, PV/Swing, PV Roll 5th POS, PV Roll 4th POS, PV Roll 3rd POS, PV Roll 2nd POS, and PV Roll 1st POS;

**Calendar/Reel Section:** includes Tension, Spreader, Paper, Bowed, Top, 2nd, 3rd, Intermediate C.C., Queen, KING, Reel Drum, and Reel Spool;

**Winder Section**: includes Lead In, Bowed, Top Sectional, Bottom Sectional, Front Drum, and Rear Drum;

**Spare Paper Machine Rolls:** includes Couch Roll, Granite Roll, and Pick-up Roll;

**Spare Paper Machine Couch Roll**

**Spare Paper Machine Granite Roll**

**Spare Paper Machine Pick-Up Roll**

**Various Paper Machine Rolls**

**Motor Control Centers:**

**600V Allen Bradley**

**600V General Electric**

**2400V Allen Bradley**

**2400V Cutler Hammer**

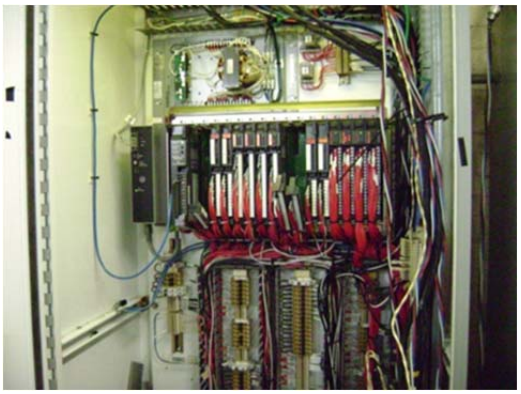
**13.8KV Disconnect Switches, Dry Type Transformers, 600V Distribution Breakers:**

**Westinghouse DS 416 Breakers**

**GE type AK-2-25 Breakers**

**Allen Bradley Programable Logic Controllers:**

**Control Logic**



**PLC 5**

**Distributed Control System:**

**ABB/Bailey Infi 90/Net90**

**Vibration Monitoring Equipment:**

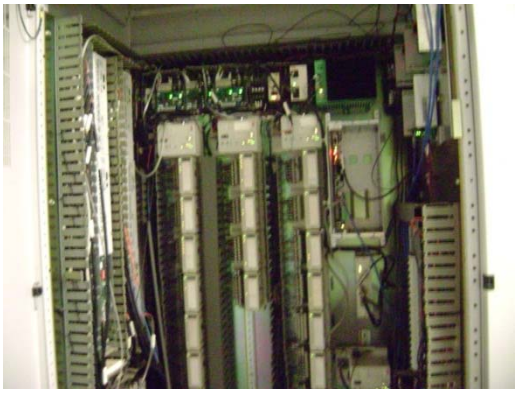
**ABB Smart Advisor/Monitoring Technology Corporation P-200/MS-200 Online Vibration Monitoring**

**Instrumentation:**

**Various Transmitters**

**Various Flow Tubes/Valves**

**ABB Paper Machine Drive System:**



**APC/AC80**

**GOP**

**DC Drive Line-Up**

## Parcel 5 – Miscellaneous equipment

**Mobile equipment**: A sample of the mobile equipment available is described below. Prospective purchasers and encouraged to view a listing of miscellaneous equipment provided on the Nova Scotia Department of Economic and Rural Development and Tourism's Procurement Services website at www.gov.ns.ca/tenders/default.aspx, or Deloitte's website at www.deloitte.com/ca/renova.


**Hino Emergency Response Truck**


**1998 GMC C7500 w/ Dump**

**1999 Ford F350 V8**

**Flat Bed Trailer**

**Hyster 100E 4500lb. Forklift**


**Hyster H65 4000lb. Forklift w/ Clamp**

**Miscellaneous equipment**: A sample of the miscellaneous equipment available is described below. Prospective purchasers and encouraged to view a listing of miscellaneous equipment provided on the Nova Scotia Department of Economic and Rural Development and Tourism's Procurement Services website at www.gov.ns.ca/tenders/default.aspx, or Deloitte's website at www.deloitte.com/ca/renova.

**Various Cranes**


**1.5 MW 2400V Diesel Generator**

**Piranha Metal Shear**

**King Horizontal Metal Band Saw**

**CMC Metal Lathe 12' Bed**


**Giustina Surface Grinder**

**Hawbolt 230 Ton Press**

**Mitts & Merrill Keyseater**

**CMC 36" Sharpener**

**CNC Milling Machine**

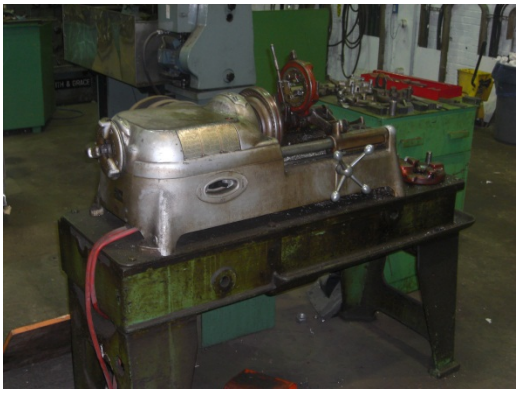
**Kitchen-Walker Radial Drill**

**Colchester-Mascot 1600 8' metal Lathe**

**Baxter Horizontal Metal Band Saw**


**Ajax-Cleveland Milling Machine**

**CMC sharpener**



**Ridgid 535 Threader**


**Enerpac 100 ton press**


**JLG Electric Manlift**

**Various Transformers**

**Various AC Motors**

## Parcel 6 – Stores inventory

Prospective purchasers and encouraged to view a listing of stores inventory provided on the Nova Scotia Department of Economic and Rural Development and Tourism's Procurement Services website at www.gov.ns.ca/tenders/default.aspx, or Deloitte's website at www.deloitte.com/ca/renova.

# Appendix D – Health and Safety Program

# MASTER HEALTH AND SAFETY PLAN

## ReNova Scotia Bioenergy Inc.
## And
## Nova Scotia Lands Inc.
## Bowater Site, Liverpool Nova Scotia


Nova Scotia Lands Inc.
P.O. Box 430, Station 'A'
Sydney, Nova Scotia
B1P 6H2
Telephone (902) 564-7937
Fax (902) 564-7903

ReNova Scotia Bioenergy Inc.
P.O. Box 1150
Liverpool, Nova Scotia
B0T 1K0
Telephone (902) 354-3411
Fax (902) 354-2271

*Prepared by*
*Sheldon Andrews*


***Revised December, 2012***
***Revised Jan. / Feb./ June/July/Aug./ 2013***

# Site Safety Plan Outline

## 1.0 Introduction

- 1.1 General Policy
- 1.2 Master Health & Safety Plan Responsibilities
- 1.3 Safe Work Permit
- 1.4 Hazard Assessment and Management
- 1.5 Potential Physical Hazards On-Site
- 1.6 Site Control and Contaminant Management
- 1.7 Decontamination

## 2.0 Regulatory Compliance

- 2.1 Canadian Standards
- 2.1.1 Workplace Hazardous Materials Information Standard (WHMIS)
- 2.1.2 Canadian Standards Association (CSA)
- 2.2 Recommended Guidelines

## 3.0 Safety Program/Prevention Procedures

- 3.1 Safety Hazards
- 3.2 Chemical Hazards
- 3.3 Electrical Hazards
- 3.4 Explosion and Fire
- 3.5 Heat Stress
- 3.6 Cold Exposure
- 3.7 Noise

## 4.0 Training Program

- 4.1 Objectives
- 4.2 General
- 4.3 Initial Training
- 4.4 Record Keeping

## 5.0 Decontamination Program

- 5.1 General
- 5.2 Worker Decontamination
- 5.3 Personal Hygiene
- 5.4 Equipment Decontamination
- 5.5 Sample Decontamination
- 5.6 Life-Threatening Situations

## Appendices

# 1.0 INTRODUCTION

The Province of Nova Scotia acquired Bowater Mersey Paper Company Limited in December 2012 and renamed it ReNova Scotia Bioenergy Inc. (ReNova). ReNova has secured the services of Nova Scotia Lands, a provincial Crown Corporation to manage the Bowater Site/former Bowater Mersey Paper Company Limited, including with respect to Health and Safety and the associated requirements, plans, processes and procedures.

Nova Scotia Lands Inc. and ReNova Scotia Bienergy Inc.are committed to providing a healthy and safe work environment for its employees by working with and co-operating with workers in preventing and controlling all undesired losses involving occupational injury and illness, equipment and materials.

As an employer, the Companies have the obligation to ensure that the measures and procedures prescribed by the Occupational Health and Safety Act and Regulations are complied to.

The Master Health and Safety Plan was developed using a reasonable and practical approach to implementing standard hygiene and safety practices which protect a worker or visitor and the public from identified hazards. This MHASP will be used as a basis for establishing minimum project-specific requirements, however, project-specific work will warrant more stringent health and safety requirements due to potential exposure to project-specific hazards and varying site conditions. As such, Project-Specific Health and Safety Plans are required to be prepared that recognize this MHASP at a minimum.

**This MHASP is designed to ensure:**

- that personnel working on various sites are not exposed to physical and chemical hazards which could adversely affect their health and safety;

- that the health and safety of the general public and the environment is not compromised by off-site migration of contaminated materials; and

- compliance is achieved with the Nova Scotia Occupational Health and Safety Act; Nova Scotia Department of Transportation and Infrastructure Renewal Occupational Health and Safety Policy; Labour Canada; CCME Guidelines for Decommissioning Industrial Sites and other applicable regulations and guidelines.

All site operations will be conducted at a minimum in accordance with the provisions of MHASP, as well as any accepted Project-Specific Health and Safety Plans. Cost and scheduling considerations will not be regarded as justification for reducing the requirements of the MHASP.

## 1.1 General Policy

It is the responsibility of all employers with individuals or visitors entering work sites to ensure that:

- the requirement of this Master Health and Safety Plan are implemented such that activities are completed in accordance with applicable legislation and standards;
- all activities are performed using standard operating procedures, protocols or work practices which are in compliance with provincial and federal legislation and acceptable to governing authorities; and

- All reasonable and practical precautions, including implementation of appropriate work practices and engineering controls, have been taken to ensure that the health and safety of any person or the public is not impaired by completion of an activity.

## 1.2 Master Health and Safety Plan Responsibilities

### Responsibility for Safety

#### 1) Policy

The responsibility for a safe and healthy workplace lies with every employee and at each level in the organization. Each employee has a personal and legal responsibility to work safely and to ensure that a safe work environment is maintained.

#### 2) Purpose

The purpose of this policy and procedure is to identify and clearly define individual responsibilities for safety.

#### 3) Scope

This policy and procedure applies to all employees of ReNova Scotia Bioenergy Inc. and Nova Scotia Lands Inc.

#### 4) Responsibility

***Management***

In general, the primary responsibility of ReNova Scotia Bioenergy Inc. and Nova Scotia Lands Inc. is to provide means and methods for a safe and healthy environment. This is accomplished by ensuring that:

- Equipment, materials and protective devices provided are in good condition, and used as prescribed.
- The measures and procedures required by law are carried out in the workplace.
- The protection of worker health and safety is maintained through information, instructions, training and supervision.
- Every reasonable precaution has been taken to ensure the protection of a worker.
- All accidents are fully investigated and corrective action taken to prevent a recurrence.

### *Supervisor*

- Ensures that workers work in the manner and with protective devices, measures and procedures required by The Act and Regulations.
- Ensures that workers use or wear the equipment, protective devices or clothing that ReNova Scotia Bioenergy Inc. and Nova Scotia Lands Inc. requires to be used or worn.
- Ensures that workers work in compliance with the applicable laws, regulations and the Occupational Health and Safety Policy.
- Advises workers of any potential or actual danger to their health and safety.
- Provides information and training as required to protect the worker's safety.
- Ensures that all workers work in a manner that will not endanger themselves or fellow workers.
- Document all minutes in writing with regard to safety meeting or issues related to health and safety.
- Take every reasonable precaution to protect workers from injury.
- Report to the Health & Safety Coordinator any problems or suggestions related to health and safety in the workplace.
- Completes a ReNova Scotia Bioenergy Inc. and Nova Scotia Lands Inc. Safe Work Permit prior to the start of each project. This permit becomes the basis for a Weekly "Tool Box Meeting" used to inform all workers of the hazards of the job.

### *Workers*

- The workers must work in compliance with the provisions of the applicable laws and regulations.
- Work in compliance with the ReNova Scotia Bioenergy Inc. and Nova Scotia Lands inc. Occupational Health and Safety Policy.
- Use or wear the equipment, protective devices or clothing that the employer requires to be used or worn.
- Report to the supervisor any problems with equipment that may endanger the worker or other workers.
- Report to the supervisor any contravention of any applicable laws or regulations and any hazard on the project.
- Work in a manner that will not endanger themselves or other workers.
- The worker must not engage in any prank, contest, feat of strength, unnecessary running or rough and boisterous conduct.
- If necessary, the worker may exercise their "right to refuse" or to stop work in "dangerous circumstances" in which:

    - A provision of any applicable acts or regulations are being contravened.
    - The contravention poses a danger or hazard to the worker.
    - The danger or hazard is such that any delay in controlling it may seriously endanger a worker.

By exercising the "Right to Refuse", a worker is acting in a safe and responsible manner. Any safety concern must be brought to the attention of the Site Supervisor and the Health & Safety Coordinator.

## 1.3 Safe Work Permit

A safe work permit form must be completed by the Project Supervisors for any activity that contains a site investigation or remediation/work tasks.

Task specific details, suspected physical, chemical and biological hazards, are to be documented on the Safe Work Permit form for each task to be completed. Details provided will contain sufficient information regarding proper Personal Protection Equipment required for each task.

The Safe Work Permit form must be submitted to the site Health & Safety Coordinator prior to commencing the activity. The activity will not be initiated until formal acceptance has been granted by the Health & Safety Coordinator.

## 1.4 Hazard Assessment and Management

A hazard assessment must be completed for each work site and included in any Project-Specific Health and Safety Plan. The results of the hazard assessment must be communicated to employees during Safe Work Permit Meetings, Tool Box Meetings and prior to commencing a project.

## 1.5 Potential Physical Hazards On Work Sites

The following is a list of physical hazards that may be encountered during site activities:

**Slip, Trip, Falls** - Good housekeeping will be maintained at all work sites. Trip hazards will be removed, marked, or guarded. Extreme caution must be used when working on or around slippery surfaces, and fall protection will be worn at elevations greater than three (3) meters. All necessary precautions will be taken to prevent personnel from injuries caused by slick surfaces.

**Back Strain** - Proper lifting techniques must be used when handling heavy or bulky loads. Personnel must lift with legs; keeping backs straight, and loads close to their bodies. Avoid twisting at the waist during lifting. Personnel must receive help from others when loads appear to be too heavy. Mechanical means of lifting is the preferred method and will be used whenever possible.

**Buried Utilities** - All buried utilities must be identified by the contractor in conjunction with ReNova Scotia Bioenergy inc. and Nova Scotia Lands Inc. personnel prior to any intrusive work in the area. Buried utilities will never be located by mechanically powered excavating

equipment. Instead, buried utilities will be located by use of engineered drawings, hand excavation and/or electronic sensing techniques.

**Electrical** - Only qualified personnel are authorized to work on electrical circuits. Appropriate Lock Out/Tag Out procedures must be followed before any maintenance on electrical circuits or equipment is to take place. Extension cords will be inspected daily. Damage extension cords will be taken out of service immediately. Electrical cords not specifically made for water submersion will be kept out of wet areas. Ground fault circuit interrupters (GFCI) will be used on all temporary electrical circuits (including generators) unless an assured ground fault inspection program has been conducted and properly recorded.

**Small Quantity Flammable/Combustible Materials** - Small quantities of flammable/combustible materials must be stored in "safety" cans with appropriate flame arrestors, self-closing lids, and labeled according to their contents.

**Confined Space** - In the event that there are confined spaces present at the job site to be entered, Standard Operating Procedures (SOP) covering air monitoring, training, permitting, rescue, and personal protective equipment must be reviewed and followed. At no time will any personnel be allowed to enter a confined space until all criteria of the SOP are met.

**Overhead Hazards** - Investigation of a work area must be conducted before any work is to begin. Proper clearances must be maintained at all times. Equipment must not deviate from established roadways or work areas where clearances are unknown or insufficient. Hard hats are to be worn on all construction sites, especially where there is any potential of overhead hazard or if heavy machinery is in use.

**Heat/Cold Stress** - Personnel have the potential to be exposed to climatic extremes of both heat and cold. Because of these conditions, Standard Operating Procedures for heat and cold Stress must be developed so that the hazards associated with these temperature extremes on the body can be recognized and avoided.

**Animal/Insect/Vegetation** - Rodents, snakes, stray animals, stinging insects, and poison ivy, sumac and oak are all environmental hazards that maybe encountered during daily site operations. Site investigation to identify the hazards, prior to work related activities is essential. The information obtained will then be passed on to site personnel. Project-specific procedures must be instituted should there be a reasonable potential for these hazards.

**Obscured Subsurface Opening/Collapsed Utilities** - Caution must be exercised when conducting fieldwork in unfamiliar areas where obscured subsurface openings and collapsed utilities may be present. The location of these hazards must be clearly marked and guarded when

found, and immediately communicated to ReNova Scotia Bioenergy Inc. / Nova Scotia Lands Inc. Health and Safety Coordinator and other personnel to avoid potential accidents and injuries. Temporary or permanent actions to eliminate the hazard or decrease the risk of injury will be conducted upon consultation with ReNova Scotia Bioenergy Inc. and Nova Scotia Lands Inc.

**Risk of Drowning and Water Hazards** - Standard Operating Procedures for working around bodies of water must be developed and implemented. The SOP must include precautions taken when working around water and ice, guidelines associated with boating safety, and measures taken to prevent, recognize, and treat hypothermia. Personal flotation devices will be provided in compliance with the Canadian General Standards Board, CAN/CGSB-65.11-M88, "Personal Flotation Devices".

**Chemical Hazards** - Each site will present its own challenges with regard to hazardous chemicals. It is for this reason that various means will be used to determine what chemicals are present. Site history, test pitting and core sampling are some of the means available to make this determination. Regardless, the CCME guidelines for decommissioning of industrial sites will be followed. Most industrial sites are contaminated with hydrocarbons. Solvents, cleaners and paints that are commonly used contain volatile organic compounds. Compounds that are of most concern are Benzene, Toluene, Ethylbenzene and Xylene because they are suspected carcinogens. Material Safety Data Sheets, proper respiratory protection and personal protective equipment will be used to protect workers.

**Excavations/Trenching** – During the course of testing and remediation, workers are to keep a safe distance from any open holes. Fencing, barricades and caution tape are to be used to identify these areas. If workers are required to work within these areas, the Nova Scotia Occupational Safety General Regulations referencing excavations and trenching are to be followed.

**Asbestos** – Workers must always be aware that on any given industrial site, the potential exists that asbestos containing material may be present. Asbestos has been used as an insulating material on building walls and ceilings, pipe insulation, electrical insulation and gaskets. Whenever asbestos is suspected, work in that area is to stop immediately and a sample will be sent for testing. If confirmed, procedures for asbestos abatement are to be followed.

**Mobile Equipment** – Heavy mobile equipment is required to perform most of the work during remediation. As a result, workers and operators are required to be aware of the personnel working in their area. All workers are to wear high visible reflective vests/jackets while on the site. Never approach heavy equipment unless you have eye contact with the operator. All heavy mobile equipment on site are required to have working, audible back up alarms.

**Overhead Power Lines** – During the course of the site hazard assessment, if overhead power lines have been identified, proper procedures are to be followed. Always maintain a 20 ft. clearance from power lines unless you have a safe clearance report from Nova Scotia Power. A spotter may be required at times or the lines may have to be protected.

**Polychlorinated Biphenyls** – PCB's can be found in a wide variety of uses. The most common use has been in the electrical field, where they are found in transformers, capacitors and ballasts. If testing confirms the presence of PCB's, proper procedures must be followed for the removal and disposal.

## 1.6 Site Control and Contaminant Management

All reasonable and practical removal, handling, transportation, storage and disposal procedures must be used to:

- minimize raising of dust;
- minimize the mobilization of hazardous substances contained within equipment and materials;
- minimize the release of hazardous materials (liquid, solid or gas) into the environment;
- minimize the migration of subsurface contaminants as a result of an activity having a physical (i.e., vibration) or chemical (i.e., increased rainwater infiltration) influence or subsurface materials;
- contain all hazardous materials mobilized on the ground surface for proper treatment or disposal; and
- minimize personal exposures to hazardous materials.

In areas that are accessible to the public, active work areas must be enclosed with caution tape providing safe separation from the work activity. A minimum separation distance of 10 meters will be provided.

Site control procedures must be developed for all activities involving hazardous materials. Exclusion, Contaminant Reduction and Support Zones will be established as outlined in the national Institute for Occupational Safety and Health (NIOSH) Publication No. 85-115, "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities".

Contamination control zones are maintained to prevent the spread of contamination and to prevent unauthorized people from entering hazardous areas. The required contamination control zones are as follows:

- **Exclusion Zone (EZ)** – the EZ consists of the specific work, or may be the entire area of suspected contamination. All employees entering the EZ must use the required PPE, and must have the appropriate training and medical clearance for hazardous waste work. The EZ is the defined area where there is a possible respiratory and/or contact health hazard. The location of each EZ will be identified by cones, caution tape or other appropriate means.

- **Contamination Reduction Zone (CRZ)** – The CRZ or transition area will be established, if necessary, to perform decontamination of personnel and equipment. All personnel entering or leaving the EZ will pass through this area to prevent any cross-contamination. Tools, equipment, and machinery will be decontaminated in

a specific location. The decontamination of all personnel will be performed on-site adjacent to the EZ. Personal protective outer garments and respiratory protection will be removed in the CRZ and prepared for cleaning or disposal. This zone is the only appropriate corridor between the EZ and SZ.

- **Support Zone (SZ)** – The SZ is a clean area outside the CRZ located to prevent employee exposure to hazardous substances. Eating and drinking will be permitted in support area only after proper decontamination.

## 1.7 Decontamination

Equipment and vehicles used on the Site will be properly decontaminated prior to being removed from the site. Vehicles remaining on gravel-covered access roads do not require decontamination. Standard Operating Procedures for Decontamination must be developed to minimize the spread of contamination within different areas of the site. Appropriate Personal Protective Equipment (PPE) will be used when conducting decontamination involving chemical solvents. Material Safety Data Sheets (MSDS) for these contractor-supplied solvents must be included in the Project-Specific Health and Safety Plan as an attachment.

The Consultants/Contractors will provide, as a minimum, the following:

- Suitable containers for storage and disposal of used disposable PPE;
- Potable water and a suitable sanitation facility; and
- Shower and locker facility for all on-site personnel.

The Consultants/Contractors must enforce the following provisions:

- On site personnel must wear appropriate PPE at all times when entering or working in the Exclusion or Contaminant Reduction Zones;
- Used disposable PPE must not be reused, and when removed, will be placed inside appropriate containers provided for that purpose;
- Soiled disposable outerwear must be removed prior to entering the lunch area, and prior to cleansing hands;
- On site personnel must thoroughly cleanse their hands and other exposed areas before entering the lunch area and before leaving the site;
- All personnel in Level A or B PPE, or Level C depending on work conditions, will shower and change to fresh clothing after each working period or shift, prior to leaving the Site;
- Water generated from washing and showering must be stored or disposed of in accordance with applicable regulations and standard practices; and
- Work boots will be left at the site at the end of each workday, or cleaned/brushed to remove visible dirt before leaving the site. Grossly contaminated boots must be left at the work site.

# 2.0 REGULATORY COMPLIANCE

## 2.1 Canadian Standards

### 2.1.1 Workplace Hazardous Materials Information Standard (WHMIS)

This text is designed to meet the requirements of Nova Scotia's WHMIS regulation, which has been issued under the Canadian Occupational Health and Safety Act of 1985.

### 2.1.2 Canadian Standards Association (CSA)

Standards published by the CSA (i.e.: respiratory protection, and electrical) have been utilized in this document. They serve as a strong baseline for procedures developed for the PSHSP.

## 2.2 Recommended Guidelines

**Canadian Council of Ministers of the Environment**

This document referencing the National Guidelines for Decommissioning Industrial Sites will be followed for all projects falling under these guidelines.

**American Conference of Governmental Industrial Hygienists (ACGIH)**

The threshold limit values (TLVs) and Biological Exposure indices (BEIs) addressed in text are used as guidelines to assist in the control of health hazards at cleanup sites. They are used for the sole purpose of industrial hygiene practices, to be interpreted and applied only by persons trained in this discipline. In addition, ACGIH guidelines for chemical protective clothing and air sampling equipment were utilized when researching appropriate levels of protection required for employees and formulating sampling strategies, respectively.

**National Institute for Occupational Safety and Health (NIOSH)**

The US Occupational Safety and Health Act of 1970 emphasizes the need to protect the health and safety of workers occupationally exposed to an ever-increasing number of potential hazards. Consequently, NIOSH has implemented a program to evaluate the adverse health effects of chemicals and physical agents and industrial processes. This text applies pertinent NIOSH criteria documents regarding chemicals found at industrial sites, as well as sampling and analytical methodologies currently recommended for good standards of industrial hygiene practice.

# 3.0 SAFETY PROGRAM/PREVENTION PROCEDURES

## Safety General

Activity conducted at facilities which handle hazardous materials pose a multitude of health and safety concerns, any one of which could result in serious injury or death. These hazards are a function of the nature of the facility as well as a consequence of the work being performed. They include:

**3.1 Physical Hazards**
**3.2 Chemical Hazards**
**3.3 Electrical Hazards**
**3.4 Explosion and Fire Hazards**
**3.5 Heat Stress**
**3.6 Cold Exposure**
**3.7 Noise**

## 3.1.1 Physical Hazards

Hazardous materials handling operations and facilities may present numerous safety hazards such as:

- Holes, ditches, excavations and trenches
- Precariously positioned objects, such as drums or boards that may fall
- Sharp objects, such as nails, metal, broken glass and overhead ice
- Slippery or icy surfaces
- Steep grades/uneven terrain
- Unstable surfaces, such as walls that may cave in or flooring that may give away

Accidents involving physical hazards can directly injure workers and can create additional hazards, for example, increased chemical exposure due to damaged protective equipment, or danger of explosion caused by the mixing of chemicals.

Some safety hazards are a function of the work itself. For example, heavy equipment creates an additional hazard for workers in the vicinity of the operating equipment. Protective equipment can impair a worker's agility, hearing, and vision, which can result in an increased risk of an accident.

## 3.1.2 Safety Procedures

The following safety practices should be observed in any area where hazardous material(s) are being handled.

1. All work areas must be kept free of physical hazards such as unnecessary tools and equipment, debris, containers, sharp objects, and any other potential physical hazards not necessary for operations currently being performed.

2. Smoking, and the use of lighted matches or open flames are strictly prohibited in any area where flammable materials may be present.

3. Eating, drinking, chewing gum or tobacco, smoking, or other practices that increase the probability of hand-to-mouth transfer of materials will be prohibited in areas where hazardous materials are handled.

4. Whenever hazardous materials are being handled and full decontamination procedures are not in use, individuals must wash face and hands thoroughly after leaving the area.

5. Contact with chemicals or contaminated surfaces must be avoided. Employees must not kneel, sit, or place tools or other articles on contaminated surfaces. If contact with hazardous materials cannot be avoided, chemical protective equipment will be worn, and appropriate decontamination and/or disposal procedures followed.

6. Non-essential personnel must not be allowed in areas where chemicals are being handled or potentially hazardous operations are being conducted.

7. Medicine and alcohol can potentate the effects of exposure to chemicals. Personnel taking prescription drugs must be cleared by the administering physician before conducting work involving hazardous materials.

8. Consumption of alcoholic beverages, use of drugs, or intoxication are strictly prohibited where the handling of hazardous materials or work involving machinery is involved.

9. All personnel working with chemicals must be adequately trained on company health and safety policy, anticipated hazards, safety practices, and emergency procedures. Training will, at a minimum, satisfy the requirements of the WHMIS regulation.

10. Entry into confined spaces must be conducted by utilizing the safe work permit system only.

11. All work practices must be conducted in compliance with applicable provincial and federal provisions, and any other applicable regulations.

12. Personal protective equipment must be worn by an employee conducting operations, which may reasonably be expected to result in exposures to chemicals at levels at or above the Threshold Limit Values for materials being handled.

13. Limit values for materials being handled.

14. Personnel handling hazardous materials will constantly watch for potential safety hazards, and must immediately inform their supervisors of any new hazards identified so that mitigative action can be taken.

## 3.2 Chemical Hazards

### 3.2.1 General

Preventing exposure to hazardous chemicals is a primary concern during any operation involving the use of hazardous materials. Various remediation projects may contain a variety of chemical substances in gaseous, liquid, or solid form. These substances can enter the unprotected body by inhalation, skin absorption, ingestion, or through a puncture wound (injection). A contaminant may cause damage at the point of contact or can act systemically, causing a toxic effect at a part of the body distant from the point of initial contact.

### 3.2.2 Chemical Exposures

Chemical exposures are generally divided into two categories:

1) Acute: Symptoms resulting from acute exposure usually occur during or shortly after exposure to sufficiently high concentration of a contaminant. The concentration required to produce such effects varies widely from chemical to chemical.

2) Chronic: Generally refers to exposures to "low" concentrations of a contaminant over an extended period of time. The "low" concentrations required to produce symptoms of chronic exposure depend upon the chemical, the duration of each exposure, and the number of exposures.

### 3.2.3 Effects of Exposure

For either chronic or acute exposure, the toxic effect may be temporary and reversible, or may be permanent (disability or death). Some chemicals may cause obvious acute symptoms such as:

- burning,
- coughing,
- nausea,
- tearing eyes, or
- rashes.

For a given contaminant, the symptoms of an acute exposure may be completely different from those resulting from chronic exposure. Other chemicals, such as PAH's may cause health damage with little or no warning signs (this is a particular concern for chronic exposures to low concentrations). Health effects such as cancer or respiratory disease may not manifest for several years or decades after exposure.

In addition, some toxic chemicals may be colorless and/or odorless (CO), may dull the sense of smell (H2S), or may not produce any immediate or obvious physiological sensations. Thus, a worker's senses or feelings cannot be relied upon in all cases to warn of potential toxic exposure.

Some chemicals are heavier than air and will settle close to the ground such as Propane or Chlorine. Chlorine also reacts with water to form hydrochloric and hypochlorous acid.

The effects of exposure not only depend on the chemical, its concentration, route of entry and duration of exposure, but may also be influenced by personal factors such as the individual's smoking habits, alcohol consumption, medication use, nutrition, age, and gender.

### 3.2.4 Routes of exposure

#### 1) Inhalation

The primary exposure route of concern during any work involving hazardous materials is inhalation. The lungs are extremely vulnerable to chemical agents. Even substances that do not directly affect the lungs may pass through lung tissue into the bloodstream, where they are transported to other vulnerable areas of the body. The following guidelines can help protect against inhalation hazards:

Wearing an appropriate respirator when working in areas at or above the TLV's for that particular chemical compound. Conducting qualitative fit testing procedures prior to donning a respirator and continuing these fit testing procedures on at least an annual basis thereafter implementing a written respiratory protection program which institutes procedures for selection, use, inspection, maintenance, and storage prior to utilizing respiratory protection.

#### 2) Absorption

Direct contact of the skin and eyes by hazardous substances is another important route of exposure at the site. Some chemicals directly injure the skin through contact dermatitis or from corrosive materials (lime) causing redness and irritation and burning to the exposed area. Some pass through the skin into the bloodstream where they are transported to vulnerable organs. Skin absorption is enhanced by abrasions, cuts, heat, and moisture. The eye is particularly vulnerable because airborne chemicals can dissolve in its moist surface and be carried to the rest of the body through the bloodstream (capillaries are very close to the surface of the eye). The following guidelines can help protect against skin and eye contact:

- Wearing protective equipment
- Not using contact lenses in contaminated atmospheres
- Keeping hands away from the face
- Minimizing contact with liquid and solid chemicals.

### 3) Ingestion

Although ingestion should be the least significant route of chemical exposure, it is important to be aware of how this type of exposure can occur. Deliberate ingestion of chemicals is unlikely. Personal habits such as the following may provide a route of entry of chemicals:

- Chewing gum or tobacco
- Drinking, eating, and/or smoking cigarettes in a potentially or known contaminated area.

### 4) Injection

The last primary route of chemical exposure is injection, whereby chemicals are introduced into the body through puncture wounds (for example, by stepping on or tripping and falling onto contaminated sharp objects). The following are important protective measures against the potential for injection:

- Wearing safety shoes
- Removing or avoiding physical hazards
- Taking common sense precautions

## 3.3 Electrical Hazards

### 3.3.1 General

Electrically powered equipment, overhead power lines, downed electrical wires, and buried cables all pose a danger of shock or electrocution if workers contact or sever them. To help minimize this hazard, workers in the vicinity of electrically powered equipment must be trained as how to properly operate equipment, which poses a possible electric shock hazard without contacting electrical sources or conduits. In the case of electrocution, it is the electric current that kills the victim, which is measured in amperes (amps). The flow of electricity, or potential to do work is measured in terms of voltage (volts). The relationship between voltage and current is:

V = IR, whereas;

V = the voltage (in volts),
I = the current (in amps), and
R = the resistance (in ohms).

Electric potential in electric circuits is divided into three categories based on total voltage of the circuit. The three categories are;

Safety Voltage = less than 25 volts
Low Voltage = 25 to 600 volts
High Voltage = more than 600 volts

The maximum current which can be carried by a circuit with a voltage of less than 25 volts will not usually cause death or serious injury, and is therefore called Safety Voltage. Low and High Voltage conductors can both cause death by electrocution. Only a few thousandths of an amp (milliamps) are required to kill a human being. The average person can detect a current of about 2 milliamps. Between 5 and 25 milliamps pain is experienced, and the victim may not be able to let go of the conductor because of muscle contraction caused by the electricity. An electric shock from a conductor carrying a current as low as 50 to 200 milliamps can result in death or serious injury.

### 3.3.2 Pathway

The pathway the current takes through the body is also an important factor in determining the seriousness of the resulting injury.

- If the current takes a path through the body, which causes it to pass through vital organs (brain, lungs, or heart), however, the injury may be life threatening.
- An electric current which enters the body through one hand and exits through the other for instance, will follow a pathway through the lungs and heart, resulting in possible respiratory arrest and/or ventricular fibrillation, both potentially fatal injuries.
- If a current enters the body through the left hand and exits through the left foot, for example, critical organs are not affected.
- Electricity can also damage blood vessels throughout the body, resulting in massive hemorrhaging, which may cause death due to shock and blood loss.

### 3.3.3 Safety Precautions

1) The following safety precautions and safety practices are recommended for all work involving potential electric shock hazard:

2) When it is determined that an electrical hazard exists, only a qualified individual will be assigned to the work, and the site supervisor must be notified before any work begins that may affect the utility concerned.

3) All wires or cables will be considered as energized with potentially fatal voltages (including electric, fire alarm, telephone, street light, cable television cables, etc.) until verified otherwise by a qualified individual.

4) Conductors that have a protective coating must not be considered to be insulated or safe; in many cases the coating is only a weatherproofing with little, if any, insulation value.

5) Under no circumstances will any person contact an energized electrical conductor, electrical apparatus such as a transformer, or any conductive object in contact with an energized electrical conductor. Electrical capacitors may retain a charge. All such items will be properly grounded before handling.

6) When use of temporary electrically powered equipment is necessary, low-voltage equipment with ground-fault interrupters and watertight, corrosion-resistant connecting cables will be chosen whenever possible.

7) All electrical equipment must be maintained free from recognized hazards that are likely to cause death or serious physical harm to personnel.

8) All electrical equipment must be suitable for the intended use. Suitability for an intended purpose is evidenced by appropriate listing or labeling by a recognized testing and certification body, such as Canadian Standards Association (CSA) certification of quality and acceptability of a product for use. Electrical equipment must be installed and/or used in accordance with that listing or labeling.

9) Motors and appliances must have an identifiable means of disconnection. Each disconnecting means must be clearly and legibly marked to indicate its purpose, unless located and arranged so the purpose is evident.

10) Before working on any energized equipment, the source of electric power must by CSA regulations be locked-out and tagged-out. You must lock-out the power source using your own lock, have a written lock-out program identifying lock-out and tag-out procedures, and test the de-energized equipment prior to beginning work. All personnel in the vicinity must be informed of the lockout and the work being done.

11) When working in close proximity to energized conductors, special attention must be paid to tools and equipment. Tools that are normally considered non-conductive may become conductive if not maintained properly. If defective tools are brought into contact with an energized conductor, a shock could occur.

12) Non-conductive tools and ladders must be kept clean and dry to ensure their safety for use. Only non-conductive ladders will be used where electrical shock hazard exists. When ropes and wooden tools become soiled or damp, they may conduct electricity.

13) A clean, non-conductive, hard hat must be worn when working near electrical conductors. Hard hats must be inspected periodically for defects that would lower their protective qualities. However, it must never be relied upon as effective protection from energized conductors.

14) Rubber gloves or rubber soled boots are not to be used or relied upon as insulation protective equipment.

15) Employees will not do work on or about electrical lines or equipment for which they are not qualified, unless they are under direct supervision of an experienced and properly qualified employees.

16) Remotely controlled switches alone must not constitute an acceptable means of disconnection, but will be supplemented by a manually operated disconnecting means.

17) Unauthorized employees must not work in or around any place or structure in proximity to energized or live electrical wires or equipment which are not normally isolated by position or elevation unless such electrical lines or equipment are provided with guards which will effectively prevent contact by any person or by any electric current-conducting equipment being used.

18) Means of access to all switches must be clear of obstructions at all times.

19) Tunnels containing wires or appliances carrying electric current will be kept in a sanitary condition, free from stagnant water or seepage or other drainage, which may be offensive or dangerous to health of employees while at work in such tunnels.

20) Metal ladders or ladders having reinforcing wire or other conducting material will not be used near electrical wires or equipment. All ladders which may be used on or near electrical equipment operating at more than 750 volts line to line must be standard safety ladders.

21) Rubber, or equivalent, covered cord will be used for portable electrical tools, extension lamps, or for high voltage switching and must be checked periodically.

22) Working around electricity with wet or injured skin significantly reduces the body's resistance and therefore increases the potential for serious injury. Dry skin has a natural resistance to electric current flow of approximately 500,000 ohms, however when skin is wet its resistance may fall to as low as 500 ohms. Under these conditions, 500 times the current can flow through the victim's body at the same voltage, resulting in a much more serious injury.

## 3.4 Explosion and Fire

There are many potential causes of explosions and fires at facilities, which handle hazardous materials:

- Chemical reactions that produce explosion, fire, or heat.
- Ignition of explosive or flammable chemicals.
- Ignition of materials due to oxygen enrichment.
- Agitation of shock or friction sensitive compounds.
- Sudden release of materials under pressure.

Explosions and fires may arise spontaneously. However, more commonly they result from:

- Facility activities such as moving drums.
- Accidentally mixing incompatible chemicals

- Introducing an ignition source (such as a spark from equipment) into an explosive or flammable environment.

Explosions and fires not only pose the obvious hazards of intense heat, open flame, smoke inhalation, and flying objects, but may also cause the release of toxic chemicals into the environment. Such releases can threaten both personnel at the work site and members of the general public living or working nearby.

### 3.4.1 Prevention

To reduce potential of an explosive hazard:

1) Have a competent person monitor for explosive atmospheres and flammable vapors when potential is present;

2) Keep all potential ignition sources away from known or potentially explosive or flammable environments;

3) Use non-sparking, explosion-proof equipment for facility operations;

4) Follow safe work practices at all time; and

5) Properly maintain a means of egress or escape that is convenient and having easy passage with all areas likely to be used by any person.

## 3.5 Heat Stress

### 3.5.1 General

Heat stress is a major hazard, especially for workers wearing protective clothing. The same protective materials that shield the body from chemical exposure also limit the dissipation of body heat and moisture. Personal protective clothing can therefore create a hazardous condition. Depending on the ambient conditions and the work being performed, heat stress can occur very rapidly – within as little as 15 minutes. In its early stages, heat stress can cause rashes, cramps, discomfort and drowsiness, resulting in impaired functional ability that threatens the safety of both the individual and coworkers.

Continued heat stress can lead to heat stroke and death. The following procedures must be implemented to protect against this hazard.

- Avoiding overprotection
- Receiving training
- Performing frequent monitoring of personnel who wear PPE
- Judicious scheduling of work and rest periods

- Frequent replacement of fluids.

Heat stress is caused by a number of interacting factors, including environmental conditions, clothing, workload, and individual characteristics of the worker. Because heat stress is probably one of the most common (and potentially serious) illnesses at hazardous waste sites, regular monitoring and other preventive precautions are vital. Individuals vary in their susceptibility to heat stress. Factors that may predispose someone to heat stress include:

* Lack of Physical fitness
* Lack of acclimatization
* Age
* Dehydration
* Obesity
* Alcohol and drug use
* Gender
* Chronic disease
* Diarrhea
* Sunburn
* Infection

The amount and type of personal protective equipment worn is directly related to reduced work tolerance and the risk of heat stress. Chemical protective clothing and equipment add weight and bulk, and diminish or prevent liquid and vapor exchange.

1) CPC severely reduces the body's normal heat exchange mechanisms (evaporation, convection, and radiation) and,

2) A bulky suit can increase by two to four times the energy ordinarily needed to perform a task.

Once protective equipment is selected, the length of a particular employees work period will have to be redefined based upon the following criteria:

- Work rate
- Ambient temperature and other environmental factors
- Type of protective ensemble
- Individual worker characteristics

### 3.5.2 Monitoring

Because the occurrence of heat stress depends on a variety of factors, all employees, even those not wearing protective equipment, must be monitored.

1) **Permeable clothing**: such as cotton or synthetic work clothes. Follow recommendations for monitoring requirements and suggested work/rest schedules in the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Heat Stress.

2) **Semi-permeable or impermeable clothing:** (encapsulating ensembles). Monitor when the ambient temperature is above 70 °F. It may also be necessary to monitor at lower temperatures if humidity is high.

Although no protective ensemble is completely impermeable, for practical purposes an outfit will be considered impermeable when calculating heat stress risk. To monitor the employee, measure:

1) **Heart Rate** Count the radial pulse during a 30-second period immediately following the end of a work period.

- If the heart rate exceeds 140 beats per minute at the end of a work period and 100 beats per minute at the end of a rest period, shorten the next work cycle by one third or lengthen the rest period by one-third.

2) **Oral Temperature** Use a clinical thermometer (3 minutes under the tongue) or similar device.

- If oral temperature exceeds 99.6 °F, shorten the next work cycle by one-third or lengthen the rest period by one-third.
- Do **NOT** permit an employee to wear a semipermeable or impermeable garment when his/her oral temperature exceeds 100.6 °F.

3) **Skin Temperature** Utilize visual signs and symptoms to measure if skin temperature is becoming:

- Red
- Hot
- Profuse sweating
- Cessation of sweating

4) **Body Weight** When feasible, measure at the beginning and end of each work day to see if enough fluids are being taken to prevent dehydration.

### 3.5.3 Prevention

Proper training and preventive measures will help avert serious illness and loss of work productivity. Preventing heat stress is particularly important because once someone suffers from heat stroke or heat exhaustion, that person is predisposed to additional heat injuries. To avoid heat stress, the following steps must be implemented:

1) Adjust work Schedules

- Modify work/rest schedules according to monitoring requirements.

- Mandate work slowdowns as needed.
- Rotate personnel; alternate job functions to minimize overexertion at one task.
- Perform work during cooler hours of the day, if possible.

2) Provide shelter or shaded areas to protect personnel during rest periods.

3) Maintain employees' body fluids at normal levels**.**

This is necessary to ensure that the cardiovascular system functions adequately. Daily fluid intake must approximately equal the amount of water lost in sweat, ( 8 ounces of water must be ingested for every 8 ounces of weight lost.) The normal thirst mechanism is not sensitive enough to ensure that enough water will be ingested to replace bodily fluids lost.

When heavy sweating occurs, one or more of the following guidelines must be implemented:

1) Maintain potable water temperature at 50 °F - 60°F.

2) Provide small disposable cups that hold four ounces.

3) Have employees drink two glasses (16 ounces) of fluid before beginning work.

4) Urge employees to drink a cup or two every 15 to 20 minutes, or at each monitoring break. A total of five or six glasses of water per day are recommended, but more may be necessary.

5) Acclimatize workers to site work conditions: temperature, protective clothing, and workload.

6) Provide cooling devices to aid natural body ventilation during prolonged work or sever heat exposure:

- Field showers to reduce body temperature and/or cool off protective clothing.
- Long cotton underwear to help absorb moisture and protect skin from direct contact with heat absorbing protective clothing.

7) Train workers to recognized and treat heat stress.

### 3.5.4 Progression of Heat Stress

1) **Heat Rash:** Results from continuous exposure to heat or humid air.
2) **Heat cramps:** Caused by heavy sweating with inadequate fluid intake.

Symptoms include:

- Muscle spasms
- Pain in the hands, feet and abdomen.

3) **Heat Exhaustion:** Occurs when body organs attempt to keep the body cool.

Symptoms include:

- Red, hot, dry skin
- Lack of perspiration
- Nausea
- Confusion and delirium
- Strong, rapid pulse
- Coma

## 3.6 Exposure to Cold

### 3.6.1 General

Cold injury and impaired ability to work are dangers at low temperatures and when the wind-chill factor is low. The ACGIH cold stress Threshold Limit Values (TLV's) are intended to protect workers from the severest effects of cold stress (hypothermia) and cold injury and to describe exposures to cold working conditions under which it is believed that nearly all workers can be repeatedly exposed without adverse health effects.

The main objective is to prevent the deep body temperature (the core temperature of the body) from falling below 36°C (96.8 °F) and to prevent cold injury to body extremities (frostbite). In addition, for a single, occasional exposure to a cold environment, a drop in core temperature to no lower than 35°C (95 °F) will be permitted.

### 3.6.2 Signs and Symptoms

Lower body temperatures will likely result in:

- Reduced mental alertness
- Reduction in rational decision making
- Loss of consciousness with the threat of fatal consequences
- Pain in the extremities (may be the first early warning of danger)
- Severe shivering (develops when the body temperature has fallen to 35°C.)

### 3.6.3 Prevention

To guard against cold stress:

3) Wear appropriate clothing

Adequate insulating dry clothing to maintain core temperatures above 36 °C must be worn by workers if work is performed in air temperatures below 4 °C. Wind chill cooling rate and the cooling power of air are critical factors. Wind chill cooling rate is defined as heat loss from a body, which is a function of the air temperature and wind velocity upon the exposed body. The higher the wind speed and the lower the temperature in the work area, the greater the insulation value of the protective clothing required.

4) Have warm shelter readily available

3) Carefully schedule work and rest periods

4) Monitor workers' physical conditions.

Unless there are unusual or extenuating circumstances, cold injury to other than hands, feet and head is not likely to occur without the development of the initial signs of hypothermia. Older workers or workers with circulatory problems require special precautionary protection against cold injury. The use of extra insulting clothing and/or a reduction in the duration of the exposure period are among the special precautions, which must be followed for those individuals.

### 3.6.4 Evaluation and Control

At air temperatures of 2 °C (35.6 °F) or less, it is imperative that workers who become immersed in water or whose clothing becomes wet be immediately provided a change of clothing and be treated for hypothermia. In addition, superficial or deep tissue freezing will occur only at temperatures below –1 °C (30.2 °F), regardless of wind speed.

With regard to respirator use, under cold temperature conditions, a number of problems can develop such as:

- Fogging of full-facepiece respirators
- Valve sticking
- Rubber stiffness

These occurrences may prevent a good facial seal, which in turn will reduce the efficiency of wearing the respirator. Fogging of full-face piece respirators is easily eliminated by installing a nosecup into the face piece. This device, which must be worn whenever wearing a full-facepiece respirator, deflects the exhalation breath away from the cold face piece lens and through the exhaust ventilation valve.

Special protection of the hands is required to maintain manual dexterity for the prevention of accidents.

1) If fine work is to be performed with bare hands for more than 10 to 20 minutes in an environment below 16 °C (60.8 °F), special provisions must be established for keeping the workers hands warm. Metal handles of tools and control bars will be covered by thermal insulating material at temperatures below – 1 °C (30.2 °F).

2) Workers handling evaporative liquid (gasoline, alcohol or cleaning fluids) at air temperatures below 4 °C (39.2 °F) must take special precautions to avoid soaking of clothing or gloves with the liquids because of the added danger of cold injury due to evaporative cooling.

3) If exposed areas of the body cannot be protected sufficiently to prevent hypothermia or frostbite, protective items will be supplied in auxiliary heated versions.

4) If the air velocity at the job site is increased by wind, draft, or artificial ventilating equipment, the cooling effect of the wind must be reduced by shielding the work area or by personnel wearing an easily removable windbreak garment.

### 3.6.5 Work-Warming Regimen

If work is performed continuously in the cold at an equivalent chill temperature or below –7 °C (19.4 °F), heated warming shelters (trailers) must be available nearby. The onset of the following are indications for immediate return to the shelter:

- Heavy shivering
- Frostnip
- The feeling of excessive fatigue
- Drowsiness
- Irritability or euphoria

Dehydration, or the loss of body fluids, occurs without notice in the cold environment and may increase the susceptibility of the worker to cold injury due to a significant change in blood flow to the extremities. The intake of coffee must be limited because of the diuretic and circulatory effects, instead warm, sweet drinks and soups will be consumed at the work site to provide caloric intake and fluid volume.

For work practices at or below –12 °C (10.4 °F), the following must apply:

1) The worker will be under constant protective observation (buddy system or

supervision)

2) The work rate will not be so high as to cause heavy sweating that will result in wet clothing; if heavy work must be done, rest periods must be taken in heated shelters and opportunity for changing into dry clothing will be provided.

3) The work must be arranged in a way that sitting still or standing still for long periods is minimized. Unprotected metal chair seats will not be used. The worker must be protected from drafts to the greatest extent possible.

4) The worker will be instructed in safety and health procedures. The training program will include as a minimum instructions in:

    - Proper rewarming procedures and appropriate first aid treatment.
    - Proper clothing practices
    - Proper eating and drinking habits.
    - Recognition of impending frostbite.
    - Recognition of signs and symptoms of impending hypothermia or excessive cooling of the body even when shivering does not occur.
    - Safe work practices.

Eye protection for workers employed out-of-doors in a snow and/or ice-covered terrain will be supplied. Special safety goggles to protect against ultraviolet light and glare (which can produce temporary conjunctivitis and/or temporary loss of vision) and blowing ice crystals will be required when there is a potential eye exposure hazard.

Note: Employees will be excluded from work in cold at or below –1 °C (30.2 °F if they are suffering from diseases or taking medication which interferes with normal body temperature regulation or reduced tolerance to work in cold environments. In addition, trauma sustained in freezing or subzero conditions requires special attention because an injured worker is predisposed to cold injury.

## 3.7 Noise Exposure

### 3.7.1 General

Working around large equipment often creates excessive noise. The effects of noise can include:

1) Workers being startled, annoyed, or distracted.
2) Physical damage to the ear, pain, and temporary and/or permanent hearing loss.
3) Communication interference may increase potential hazards due to the inability to warn of danger and the proper safety precautions to be taken.

### 3.7.2 Procedures

In addition, whenever employee noise exposure equal or exceed a 9-hour, time-weighted average sound level of 85 dBA, employers must administer a continuing, effective hearing conservation program. Such controls include, but are not limited to:

1) Mandatory hearing protection areas, posted at the entry of each such work area
2) Mandatory wearing of hearing protection devices, in each posted area
3) Employees may choose to wear disposable hearing protection, but are still required to wear ear muffs that are mounted to workers hard hat, for those times that disposables are either not available or the employee has forgotten them.

If employees are subjected to noise exceeding an 8-hour, time-weighted average sound level of 90 dBA (decibels on the A-weighted scale), feasible administrative or engineering controls must be utilized.

Noise levels for compliance with occupational (above) as well as environmental exposure (per site permit) will be collected on a periodic basis.

## 4.0 TRAINING PROGRAM

### 4.1 Objectives

The objectives of any site specific training programs for personnel engaged in projects are:

- To ensure that workers are aware of the potential hazards they may encounter.
- To provide the knowledge and skills necessary to perform the work with minimal risk to worker health and safety.
- To ensure that workers can safely disengage themselves from actual hazardous situations, which may occur.
- To comply with applicable laws and regulations.

### 4.2 General

1) Employees are responsible for the proper on-the-job application of knowledge obtained through the training. Training is intended to reduce the incidence of occupational injury.

2) Employees will receive the necessary training so they can safely perform tasks that may be required on various work sites.

### 4.3 Initial Training

**1) Supervisors:**

Supervisors will have a 40-hour Hazardous Material Handling Course as well as any other training that is required depending on the project that is being worked on. It is understood that all employees will have had training in the Occupational Health and Safety Act and General Regulations, WHMIS and Due Diligence.

**2) Employees:**

Employees will be required to have site-specific orientation and training on potential hazards that may be encountered on any given site. It is understood that all employees will have had training in the Occupational Health and Safety Act and General Regulations, WHMIS and Due Diligence. Additional training will be given as required depending on the project that is being worked on.

**3) Subcontractors**

The training program will cover the following topics:

Safe work permit meeting
Project and site information
Responsibilities of on-site personnel
Worker Protection Procedures
Emergency Response/Evacuation Procedures

Length of training may vary slightly at the discretion of the SSC, on the basis of the individual's previous training and extent of possible chemical and physical hazards.

## 4.4 Record Keeping

A copy of all training records will be kept in the Site Safety Coordinator's file. These are separate records from personnel files and will have limited access and kept locked at all times.

Certificates of completion will be given to any employee who successfully completes a prescribed training session regardless of the time requirements of the course. The certificate will include the following information:

Name of participant
Name of training course
Company name
Date of completion
Unique certificate number
Expiration date

A copy of all training certificates will be kept on file. The originals can be given to the participants. Training that must be updated annually, need only be retained by the employer until the next required training has been complete, whereupon that record goes into the employees current health and safety file, replacing the expired certificate.

## 5.0 DECONTAMINATION PROGRAM

### 5.1 General

Decontamination is the process of removing or neutralizing contaminants that have accumulated on personnel and equipment. Decontamination protects workers from hazardous substances that may contaminate and eventually permeate the protective clothing, respiratory equipment, tools, vehicles, and other equipment they use on site; it protects all site personnel by minimizing the transfer of harmful materials into clean areas. Testing will determine if the following procedures are required.

### 5.2 Worker Decontamination

1) The Site Safety Coordinator will review the decontamination procedures with all personnel prior to them entering the exclusion zones.

2) All site personnel will be made aware of the importance of minimizing hazardous substance contact and of the necessity to enforce the appropriate practices and procedures throughout site operations.

3) All personnel leaving the exclusion zone will be required to dispose of tyvek clothing or decontaminate rain suits, by entering decontamination chamber in the contamination reduction zone prior to doffing protective clothing and equipment.

4) Note: Respiratory protection will remain on until decontamination of other protective gear is completed.

5) All personnel leaving the exclusion zone will discard disposable protective gear in the contamination reduction zone before leaving the site. This protective gear will be placed in appropriately marked containers for appropriate disposal.

6) All personnel will clean their individual equipment (tools, etc.) prior to removing and decontaminating their protective clothing.

7) All decontamination will occur in the contamination reduction zone, which is located at the perimeter of the exclusion zones. It is situated, whenever possible, so that individuals moving from the exclusion zone will be traveling in an upwind direction moving away from the exclusion zone.

8) The contamination reduction zone will be set up prior to any personnel or equipment entering areas where the potential for exposure to hazardous substances exists and will be used as the location for upgrading or downgrading of levels of protection.

9) Persons responsible for decontaminating respirators will be thoroughly trained in respirator maintenance.

10) If respirators become grossly contaminated, they may have to be discarded. The Site Safety Coordinator will make this decision on a case-to-case basis.

11) Respirators, reusable protective clothing, and other personal articles not only must be decontaminated before being reused, but must also be sanitized. The manufacturer's instructions will always be followed without exception.

## 5.3 Personal Hygiene

1) All personnel will practice good personal hygiene before leaving the CRZ (ie: wash hands using potable water).

2) All personnel will wash hands and face before and after eating, drinking, smoking and washroom use.

3) Showers are mandatory at the end of each work shift for those individuals required to wear personal protective equipment.

4) All personal belongings which could allow contaminants to enter one's system including: rings, glasses, chains, watchbands etc. must be removed by individuals required to wear PPE.

5) Coffee and lunch breaks must be treated as an exit protocol, (clothing removed, hands and face washed, shower not necessary) and once break is terminated, redress as in entrance protocol (ie:, don respirator, protective suit, boots, gloves, tools, etc.) for the particular job duty.

6) Smoking is not permitted in any buildings onsite.

## 5.4 Equipment Decontamination

1) The following decontamination equipment will be utilized:

- 45 gallon drums
- 6 ml polyethylene bags
- 6 ml polyethylene sheeting
- industrial strength duct tape
- disposable rags
- boot/wash tanks

- buckets and brushes
- labels, signs and barrier tape

2) All contaminated equipment will be decontaminated prior to being used at another location.

3) Any contaminated material, (other than soil samples collected for analyses), must be placed in metal drums and stored on-site until waste materials can be disposed of appropriately.

4) Wooden tools are difficult to decontaminate because they absorb chemicals. They must be kept onsite and handled only by protected workers. At the conclusion of the project, such tools will be disposed of.

5) Heavy equipment is difficult to decontaminate. Decontaminating the equipment when it becomes dirty will reduce a buildup of material, which will in turn reduce the levels of contaminants present in the air.

6) 6 ml polyethylene sheeting and duct tape are to be used whenever possible. The poly can be used as a drop cloth, which will contain any spilled material. The tape will allow an individual to roll up the sheeting securely to be place in a 45-gallon drum lined with a 6 ml poly bag, so that minimum contact with personnel is achieved.

7) All materials and equipment used for decontamination must be disposed of properly. Clothing, tools, buckets, brushes and all other equipment that is contaminated must be placed in drums, labeled and stored in a secured area until disposal is possible.

## 5.5 Sample Decontamination

1) Sampling devices require special decontamination; therefore the manufacturer's recommendations for cleaning must be adhered to.

2) Any delicate instrument which cannot be decontaminated easily will be protected while it is being used. It must be bagged, and the bag taped and secured around the instrument. Openings are made in the bag for sample intake.

3) After samples are collected, each container must be wiped clean of all debris prior to shipment to an accredited laboratory. This is especially true for bulk samples.

## 5.6 Life-Threatening Situations

1) At least one employee per shift will be trained per the requirements of St. Johns Ambulance.

2) If prompt life-saving first aid and medical treatment is required, decontamination procedures are to be omitted, unless exposure to highly toxic or corrosive materials would result.

3) Whenever possible, supervision will accompany contaminated victims to the medical facility to advise on matters involving decontamination.

4) When life-saving care is given, outside garments may be removed if they do not cause delays, interfere with treatment or aggravate the problem.

5) Respiratory protective devices and backpack assemblies must always be removed.

6) Heat stroke requires prompt treatment to prevent irreversible damage or death; therefore, protective clothing must be cut away from victim.

# APPENDIX A

# KEY CONTACT LIST

**APPENDIX A**

# RENOVA SCOTIA BIOENERGY INC.
# NOVA SCOTIA LANDS INC. / BOWATER SITE
# KEY CONTACT LIST

| POSITION | NAME | PHONE NUMBER | FAX NUMBER | CELLULAR PHONE NUMBER |
|---|---|---|---|---|
| President CEO | Jeff Larsen | (902) 424-5926 | (902) 424-0500 | (902) 229-8230 |
| Chief Opr. Officer | Joel MacLean | (902) 564-7959 | (902) 564-7903 | (902) 578-3856 |
| General Supervisor | Rob Jessome | (902) 564-4936 | (902) 564-7903 | (902) 565-8086 |
| Health & Safety | Sheldon Andrews | (902) 564-7937 | (902) 564-7903 | (902) 578-4745 |
| Site Coordinator | Tim Crowe | (902) 354-8614 | (902) 354-2271 | (902) 354-8124 |
| Site H&S Coordinator | Dan Oliver | (902) 354-8637 | (902) 354-2271 | (902) 354-8406 |
| Deloitte | Josh Beaver | (902) 721-5678 | (902) 354-2271 | (902) 759-3197 |
| Renova | Gary Keans | (902) 354-8612 | (902) 354-2271 | (902) 350-1455 |
| Renova | Victor Harlow | (902) 354-8610 | (902) 354-2271 | (902) 354-8080 |
| Renova | Glenda Murray | (902) 354-8617 | (902) 354-2271 | (902) 354-8638 |
| Site Security | Security Officer | (902) 354-8611 | | (902) 350-0330 |

# APPENDIX B

# GENERAL SAFETY RULES

## APPENDIX B

## RENOVA SCOTIA BIOENERGY INC.
## NOVA SCOTIA LANDS INC.
## GENERAL SAFETY RULES

- No food, beverages, tobacco, or cosmetic products are to be used, consumed, or brought into any Exclusion or Contaminant Reduction Zones or any other potentially contaminated areas so designated by the Health and Safety Coordinator (HSC)

- Consuming or being in possession of illegal drugs or alcohol on the Site is prohibited. Violation of this rule will result in disciplinary action including dismissal.

- Smoking is not permitted in any building on-site.

- The "buddy system" is to be enforced at all times unless the HSC specifically exempts the work from this requirement based on the review of Site conditions and hazards. When working under the "buddy system", personnel are to

  T provide their partner with assistance;
  T observe partner for signs of overexposure/temperature stress;
  T check integrity of partner's protective clothing; and
  T notify others if emergency help is needed.

- No exception to the buddy system will be made when wearing respiratory protective equipment. Visual contact must be maintained between pairs on-site and safety personnel. Entry team members are to remain close together to assist each other during emergencies.

- A respirator will not be worn when beards or any other facial hair interferes with the face-to respirator seal. Individuals with such facial hair are not allowed to work in any level of protection that requires respiratory protection.

- Field personnel can upgrade the level of protection at any time but can downgrade only with the approval of the HSC for that specific task and condition.

- Field personnel are not to enter identified confined spaces such as pits, trenches, tanks, or manholes, unless confined space entry procedures are specifically included in the Project-Specific Health and Safety Plan and are fully implemented or other arrangements have been made with the HSC.

- Drums or tanks found on-Site are not to be opened or moved unless specific drum/tank remediation tasks are included in the Project-Specific Health and Safety Plan and are fully implemented.

- Site personnel are to notify the HSC of any unsafe acts or conditions.

- Fighting, horseplay, practical jokes or interference with other workers is prohibited.
- Theft, vandalism or abuse or misuse of property is prohibited.
- Site personnel are to notify the HSC at the first indication that they are experiencing temperature stress or any signs or symptoms that may be due to exposure to chemicals.
- First Air treatment must be obtained immediately for any injury.
- Contact lenses are prohibited on the Site.
- Only tools that are in good repair meeting industry standards, with all guards and safety devices, will be used.
- Hi visibility safety vests/jackets must be worn at all times in all work areas or in other areas if required by ReNova Scotia Bioenergy Inc. or Nova Scotia Lands Inc.
- All work crews will be equipped with two-way radios or cellular telephones.
- ReNova Scotia Bioenergy Inc. and Nova Scotia Lands Inc. require all vehicles to be backed in when being parked around any buildings.

# APPENDIX C

# PERSONAL PROTECTIVE EQUIPMENT

# APPENDIX C
# PERSONAL PROTECTIVE EQUIPMENT

LEVEL A

Level A protection is designed to offer the greatest level of skin, respiratory, and eye protection. Level A is used when:

- concentrations of unidentified airborne contamination exceed 500 to 1000 ppm above background; or
- the materials are an extreme skin adsorption hazard.

**Required personal protective equipment (PPE):**

- hand hat (under suit);
- positive-pressure, full-face piece, self-contained breathing apparatus;
- totally encapsulating chemical-protective suit;
- chemical-resistant outer gloves;
- chemical-resistant inner gloves;
- chemical-resistant boots with safety toe and steel shank; and
- chemical-resistant disposable protective suit.

**Optional PPE Subject to Work Conditions:**

- hearing protection;
- cooling vest; or
- two-way radio.

LEVEL B

Level B protection is designed to offer enhanced skin protection and supplied air respiratory protection in the form of a Self Contained Breathing Apparatus (SCBA) or air line respirator with a 5-minute escape bottle. Level B is used when:

- concentrations of unidentified airborne organic compounds in the breathing zone are greater than
  5 ppm for a period of 15 minutes; or

- concentrations of chemicals in the air are immediately dangerous to life and health (IDLH) or above maximum use limits of a full-face air purifying respirator (APR); or

- oxygen deficient or potentially oxygen deficient atmospheres (less than 19.5% $0_2$) are possible;

- handling, investigation and/or sampling of unknown drummed waste; or

- confined space entry requires Level B protection.

**Required PPE:**

- hard hat;

- chemical-resistant or leather boots with safety toe and steel shank and overboots;

- chemical-resistant clothing;

- chemical-resistant inner gloves;

- chemical-resistant outer gloves; and

- positive-pressure/pressure-demand SCBA or airline respirator with escape bottle.

**Optional PPE Subject to Work Conditions:**

- disposable boot covers;

- hearing protection;

- cooling vest; or

- two-way radio.

LEVEL C

Level C protection is designed to offer air purifying respiratory protection in addition to body protection. Level C will be used when:

- the types of air contaminants have been identified, and APR that can remove the contaminants is available, the air contaminants have adequate warning properties and the criteria for the use of an APR have been met;

- concentrations of unidentified airborne organic compounds in the breathing zone are greater than
  background for a period of 15 minutes with a ceiling of 5 ppm above background; or

- concentrations of airborne particulates in the breathing zone (for 15 or more minutes) are greater than established action levels for particulates.

**Required PPE:**

- hard hat;

- chemical-resistant or leather boots with safety toe and steel shank;

- chemical-resistant clothing;

- chemical-resistant outer gloves;

- APR with half or full-face piece and appropriate cartridge; and

- safety glasses with side shields if wearing a half mask respirator.

**Optional PPE Subject to Work Conditions:**

- face shield;

- chemical-resistant inner gloves;

- disposable boot covers;

- hearing protection; or

- emergency escape mask.

LEVEL D

Level D protection will be worn when a hazardous atmosphere is not present nor is expected to be present based on planned work activities. Level D protection is designed to offer basic skin and body protection. Level D does not provide protection from inhalation exposure to hazardous substances. Modifications to Level D adjust the level of skin and body protection to the appropriate site conditions.

**Required PPE:**

- hard hat;
- chemical-resistant or leather boots with safety toe and steel shank;
- short or long sleeved shirt and pants or coveralls; and
- safety glasses with side shields or splash goggles.

**Optional PPE Subject to Work Conditions**

- face shield; or
- hearing protection.

# APPENDIX D

# PROTECTIVE FACTORS FOR RESPIRATORS

# APPENDIX D
# PROTECTION FACTORS FOR RESPIRATORS

**NIOSH Guide Certified Under 42 CFR 84**

| TYPE OF RESPIRATOR | PROTECTION FACTOR |
|---|---|
| Air purifying respirator (half mask) | **10** |
| Air purifying respirator (full face) | **100** |
| Powered air purifying respirator (half mask) | **50** |
| Powered air purifying respirator (full mask) | **1000** |
| Powered air purifying respirator (helmet/hood) | **1000** |
| Supplied air respirator-pressure demand (half mask) | **50** |
| Supplied air respirator-pressure demand (full mask) | **1000** |
| Supplied air respirator-continuous flow (half mask) | **50** |
| Supplied air respirator-continuous flow (full mask) | **1000** |
| Supplied air respirator-continuous flow (helmet/hood) | **1000** |
| Self-contained breathing apparatus - positive pressure or open/closed circuit (full face) | **10,000** |

# APPENDIX E

# EMERGENCY CONTACT LIST

## APPENDIX E
## EMERGENCY CONTACT LIST

| **ORGANIZATION** | **CONTACT NAME** | ***PHONE NUMBER*** |
|---|---|---|
| Site Security | Security Officer Main Gate | 354-8611 or 350-0330 (cell) |
| Fire Department | ***** | 911 |
| Ambulance | ***** | 911 |
| Hospital | Queens General Hospital | 354-3436 |
| Poison Control | **** | 1-800- 565-8161 |
| CANUTEC<br>(24-hour emergency) | **** | Call Collect (613) 996-6666<br>Cell *666 |
| Nova Scotia Labour and Workforce Development | **** | 521-8074 or 521-9622 Local<br>1-800- 952-2687 |
| Department of Environment | **** | Bridgewater 543-4685 |
| Police | **** | 911 |
| Region Of Queens Municipality | **** | 354-3453 |
| Nova Scotia Department of Environment (24-hour environmental emergency) | **** | 1-800- 565-1633 |
| EMO Coordinator Region of Queens<br><br>Provincial EMO Officer | Grant Webber – Emergency Response (ER)<br><br>Steve Mills (Lunenburg) | Cell- 350-3804<br>Home 354-2255<br>634-7590 |
| Brooklyn Power | **** | 354-2299 Ext. 22<br>Cell – 350-3958 |

# APPENDIX F

# HOSPITAL INFORMATION

**APPENDIX F**
**HOSPITAL INFORMATION**

| Name of Hospital: | |
|---|---|
| **Queens General Hospital** | |
| Address: | Phone No: |
| **175 School Street Liverpool Nova Scotia B0T 1K0** | **(902)354-3436** |

**Directions to Queens General Hospital From Bowater Site:**

Exit Main Security Gate turning left onto Highway #3, locally known as Brooklyn Road. Take note that this road name changes into Bristol Avenue and then Market Street. Continue on Bristol Avenue straight through traffic lights, over Mersey River Bridge onto Market Street then to Main Street. Turn left onto Main Street. Proceed on Main Street past Court Street turning right onto School Street. Proceed on School Street, Queens General Hospital is on the left.

**Travel time from site - 7 to 10 minutes**
**Distance to Hospital (km) - 4.5 km**

# APPENDIX G

# LOCKOUT / TAGOUT PROCEDURE

# Lockout / Tagout

1. Locate the area and identify the equipment or machinery to be worked on.

2. Identify all power sources affecting the equipment or machinery, such as electrical, pneumatic, hydraulic, steam, gravity, or momentum.

3. Determine whether lockout is required to perform the work assignment.

4. Locate and identify all power source components on equipment or machinery.

5. Determine whether it is physically possible to lock out each power source.

6. If lockout is required, check with qualified operations personnel before proceeding.

7. Have qualified personnel shut down the equipment or machinery. Install your personal safety lock with tag indicating name, employer, time/date, and work location.

8. Any power or product remaining in the equipment or machinery must be discharged or disconnected by qualified personnel.

9. With extreme caution, try to start the equipment or machinery manually.

10. Look for any movement of functions.

11. If none observed, try to restart again.

12. Look for any movements or functions.

13. If none observed, confirm that all power sources are at a zero energy state.

14. Carry out work assignment.

15. When work is complete and area ready to resume operation, remove all locks, tags and lockout devices. Check that all personnel are clear of the equipment or machinery.

16. Have qualified personnel restart the equipment or machinery.

# APPENDIX H

# SAFE WORK PERMIT FORM


## SAFE WORK PERMIT

**Date:**_____ **WO:**_____ **Contractor:**_____ **Supervisor:**_____

**Scope of Work:** _____

Start Date & Time: _____ Est. Comp. Date: _____

1. **Personal Protective Equipment to be worn, Specify**: ☐Hard Hats ☐Safety Boots ☐Safety Glasses ☐Fall Arrest System ☐Hearing Protection ☐Respiratory Protection ☐Chemical Goggles ☐Gloves ☐Chaps ☐Shield ☐Safety Vest ☐Others Specify_____

2. **Equipment and/or work area to be isolated**: Yes ☐ No ☐ If **yes**, Specify:_____

3. **Crane(s) Mobile Equipment Required**: Yes ☐ No ☐ Type of Equip:_____

4. **Confined Space Entry**: ☐Yes ☐No (a confined space means a space if which, because of its construction, location, contents or work activity, therein, the accumulation of a hazardous gas, vapor, dust or fume or the creation of an oxygen-deficient or oxygen-enriched atmosphere may occur.)
   Contractor to follow Confined Space Entry Procedure: ☐Issued Procedure No._____

5. **Area Gas Check Required**: ☐Specify Type_____ Contact:_____

6. **Purging of Pipelines**: ☐Yes ☐No If **Yes**, procedure must be attached, Procedure No:_____

7. **Embedded Services Locate Request discussed**: Yes ☐ No ☐

8. **Road/Rail Restrictions**: ☐Yes ☐No If **Yes**, Contact:_____

9. **Additional Protection**: ☐Safety Watch ☐Fire Watch ☐Fire Ext. ☐Spill Kit ☐First Aid Kit ☐Eye Wash Kit ☐Other_____

10. **ERP Procedures discussed/issued**: Yes ☐ No ☐

11. **Incident Tracking Form discussed:** Yes ☐ No ☐ (in the event of an incident, environmental or Health and Safety related, an incident tracking form is to be submitted to the Site H&S Coordinator)

**Notes:**_____

_____

_____

_____

_____

# APPENDIX I

# HAZARDOUS ASSESSMENT FORM

**HAZARD ASSESSMENT CHECKLIST**

Location: _____

**INSPECTION ITEMS - CHECK APPROPRIATE ONES BELOW**
**COMMENT ON SUBSTANDARD ITEMS**

- ❑ Safety program
- ❑ Safe Work Procedures
- ❑ First Aid Training
- ❑ First Aid Supplies
- ❑ Personal Protective Equipment
- ❑ WHMIS Training, Labels, MSDS's
- ❑ Transportation of Dangerous Goods
- ❑ Lunch Room
- ❑ Washroom
- ❑ Fire Protection
- ❑ Exits, Alarms, Emergency Lighting
- ❑ Aisles, Stairs Walkways
- ❑ Confined Space Entry
- ❑ Type 2 Asbestos Entry
- ❑ Type 3 Asbestos Entry
- ❑ Outdoor Asbestos Removal
- ❑ Storage Areas
- ❑ Electrical
- ❑ Lighting

9 Hand Tools

9 Power Tools

9 Housekeeping

9 Scaffolding

9 Fall Protection

9 Ladders

9 Fire Alarm

9 Posting of Job Specifications, OH&S Act, Tool Box Meetings (minutes) Inspections, etc.

9 Potential Hazards Posted

9 Maintenance of Log Books

9 Change rooms/Decontamination Facilities

9 <u>Potential Hazards:</u>
Slip Trips & Falls
Heat
Cold
Falling Objects
Radiation
Toxic, Gases, Vapors, Dust, etc.
Working at Heights
Noise

9 Other (specify) _____

**<u>Description/Observations</u>**

_____
_____
_____
_____

Signature(s): _____
_____

**<u>Recommended Action</u>**

_____
_____
_____
_____

_____
_____

## JOB PROCEDURE:

- _____
- _____
- _____
- _____
- _____
- _____

# APPENDIX J

# SITE INSPECTION FORM

## ***SAFETY INSPECTION***

**DATE:** _____ **TIME:** _____

**LOCATION:**_____

**EMPLOYEES**: _____ _____
_____ _____
_____ _____
_____ _____

**WORK DESCRIPTION:**

_____
_____
_____
_____
_____

**PERSONAL PROTECTION (PPE):** **YES:** ☐ **NO:** ☐

**PERSONAL PROTECTION EQUIPMENT:**

_____
_____
_____
_____

**OBSERVATIONS/CONCERNS:**

_____
_____
_____
_____

**INSPECTORS:** _____

_____

# APPENDIX K

# TOOL BOX MEETING FORM

**TOOL BOX MEETING**

**Date:**_____

**Project Name**: _____

**Attending:** _____ _____
_____ _____
_____ _____
_____ _____

**Location:** _____

**Review Last Meeting**:_____
_____
_____

**Topic(s)Discussed**:_____
_____
_____

**Suggestions offered**:_____
_____
_____

**Action(s) to be Taken:**_____
_____
_____

**Injuries/Accidents Reviewed:**_____
_____
_____

**Foreman's Signature:**_____

**Safety Supervisor Remarks:**_____
_____
_____

**Signature:** _____ **Date:**_____

# APPENDIX L

# INCIDENT REPORT

# INCIDENT REPORT

DATE _____ EMPLOYEE _____

TIME _____

PLACE _____

INCIDENT _____
_____
_____

DETAILS
_____
_____
_____
_____

RECOMMENDATIONS
_____
_____
_____
_____

SUPERVISOR_____ REPORTED BY _____

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