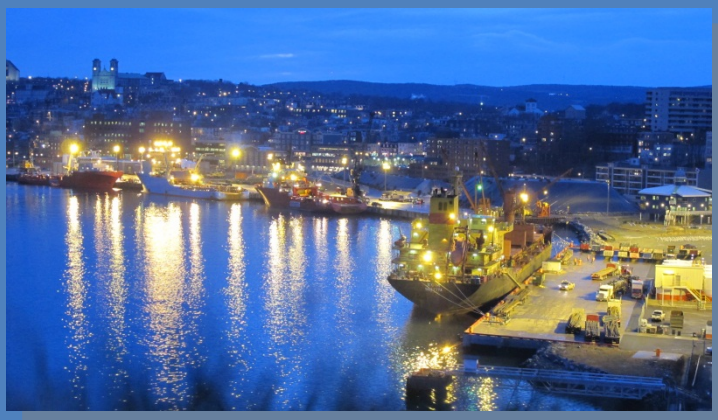
encanex

Wastewater Treatment Operation EA Review Submission

Pier 17 East - Saint John's Port Authority



Submitted to:
Newfoundland and Labrador Department of Environment and Conservation

Attention:
Director of Environmental Assessment

Submitted by:
Encanex Environmental Oil & Gas Corp
Derek Bent, Senior Operations Manager

October 25, 2012

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Appendices

October 25, 2012

Minister of Environment and Conservation
Government of Newfoundland and Labrador
Department of Environment and Conservation
P.O. Box 8700
St. John's, NL
A1B 4J6

Bas Cleary,

Further to the letter dated October 3, 2012, as found in Appendix H, please find attached our formal submission for establishing a non-permanent Wastewater Treatment Operation at the Pier 17 East location on St. John's Port Authority`s premises.

Encanex and its personnel have a great deal of experience in managing and operating wastewater treatment equipment. Encanex prides itself in using the right equipment and technologies to effectively and safely perform these services.

Encanex will diligently ensure that all the necessary processes and procedures are developed and followed as outlined in this submission to ensure the integrity of these operations meet the expectations of all interested parties.

I assure you that Encanex is a company that is dedicated to safety, environmental excellence and satisfying the customer. We are ISO 9001:2008 certified, with robust safety, environmental and quality programs, and a progressive culture nurtured by highly trained and dedicated personnel.

We are excited about the opportunity to provide a service to the offshore industry that will also provide extended benefits to the local community. For additional information pertaining to Encanex please visit our website www.encanex.com.

Sincerely,

Derek Bent, P.Eng
Senior Operations Manager / Engineer

2.0 Project Name and Encanex Company Information

Project Name: Wastewater Treatment Operation

Legal Name of Business: Encanex Environmental Oil & Gas Corp

Trade Name of Business: Encanex

Street Address: 130 Southside Road, St. John's, NL, A1C 5V3

Phone Number: (709) 770-6114

E-mail address: apayne@encanex.com

Structure of Business: Incorporated Company
(*See attached Certificate of Corporation in Appendix A*)

Nature of Business: Environmental Services, Speciality Fabricator & Leasing

Bank and Branch Location Used for Business Matters: Royal Bank, 202 Brownlow Ave, Dartmouth, NS

Website: www.encanex.com

Principle Contacts

President & CEO: Alton Payne
Office Phone: (709) 770-6114
Cell Phone: (902) 222-1731
Email: apayne@encanex.com

Senior Operations Manager / Engineer: Derek Bent
Office Phone: (902) 454-9318
Cell Phone: (902) 401-9126
Email: dbent@encanex.com

Business Background

Encanex was founded in 2005 and its sister company Watex Offshore Water Treatment Services Inc. (formerly Matrix Environmental Inc.) in 1999, collectively referred to within as Encanex. Encanex has been in the business of servicing the offshore oil and gas industry for the past 13 years.

Encanex provides water treatment services to Suncor's Terra Nova FPSO, speciality equipment to ExxonMobil and Encana, and exports internationally and most recently was awarded the offshore waste management contract for Statoil Canada.

In August 2011 Encanex purchased the assets of a speciality fabrication company which internalized our fabrication/equipment manufacturing business line and enhanced the environmental services business line.

Encanex Safety & Environmental Management

Encanex has an extensive Program of Occupational Safety and Health (POSH) and Environmental Management System (EMS) (see more details in Appendix B and C respectively).

Protecting our people and the environment is the utmost priority at Encanex. These are fundamental core values that drive our business. We believe that all incidents are preventable. Each member of our team is responsible for their safety and the safety of others. There is no expectation to conduct a task if it is not safe to do so or has a potential detrimental effect on the environment. We lead by example and work hard to create and promote a proactive culture. We are disciplined in incident prevention and actively use our processes and tools to as outlined in our management systems. Some of the tools and processes we utilize are:

- Hazard identification and corrective actions
- Job task observations
- Proactive communication
- Training and job / task specific orientations
- Daily tail gate and tool box meetings
- Job safety and environmental assessments (JSEA)
- Encourage our people to have the courage to intervene

Our mission is to actively use our management systems and continue to develop and build them so as to always be in a position to prevent safety and environmental incidents before they occur!

ISO 9001:2008 Certification

Encanex maintains a registered quality control program that meets the requirements of 9001:2008 registration (see attached copy of ISO and WCB certification in Appendix D).

Encanex applies continuous improvement methodologies to improve the level of quality performance and the overall effectiveness of operations.

Encanex is committed to creating partnerships and working relationships with suppliers and subcontractors that maintain the same level of commitment to quality.

Encanex firmly believes the benefits of maintaining and developing our Quality Management System and how it is critical in maintaining a competitive advantage while at the same time protecting the ultimate interests of product quality and customer satisfaction.

3.0 Wastewater Treatment Operation Description

Encanex has successfully been awarded a contract with Statoil Canada to provide waste management services including the management of wastewater. This has provided the justification to establish this Wastewater Treatment Operation at the Pier 17 East location.

Geographical Location:

The Pier 17 East location of the St. John's Port Authority (SJPA) is a 5000 ft^2 area of land as shown in Figure 1. A survey plot of this land parcel is shown in Appendix D.

Figure 1 – Aerial view of Pier 17 location. The area highlighted in yellow is the footprint for the Wastewater Treatment Operation.

Figure 2 – Aerial view of Pier 17 location and surrounding area. The yellow mark identifies the location of the Wastewater Treatment Operation. Photo provided by Pictometry Bird's Eye, 2012 MDA Geospatial Services Inc.

Figure 3 – Aerial view of Pier 17 location and surrounding area. The yellow mark identifies the location of the Wastewater Treatment Operation. Photo provided by Pictometry Bird's Eye, 2012 MDA Geospatial Services Inc.

Physical Features:

The Pier 17 East location will be paved and fenced in around the perimeter of the 5000 ft^2 area less the waterline with a 16' entrance gate for controlled access. On the site there will be a series of containers for the water treatment equipment, office and material storage units. There will also be a series of tanks (up to 6) to contain both wastewater and treated water. Containment areas will be installed around equipment containing wastewater treatment and water storage tanks. Piping will be installed only

each of the dolphins to transfer wastewater from the supply vessel to the treatment equipment. Figure 4 illustrates the layout of the site.

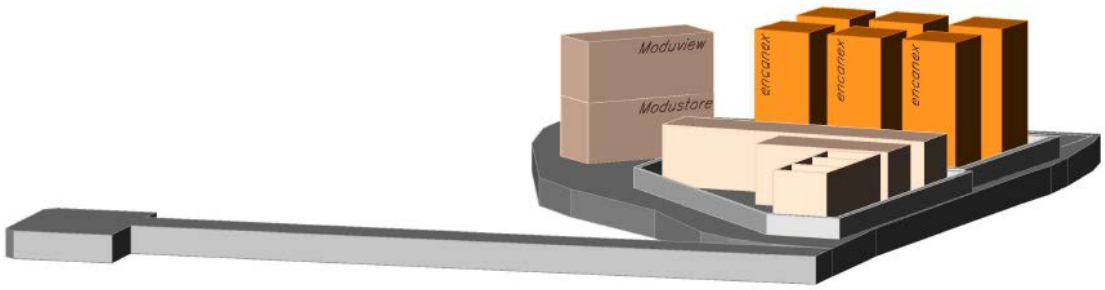

Figure 4 – Site equipment layout

Access to the Pier 17 East site through the main entrance on Army Dock Road and then pass through the Pier 17 (MI Swaco) site. Electrical distribution to power the equipment on site will be supplied by Newfoundland Power Inc. All operations will exist within the footprint outlined above with no contact to surrounding harbour water or shoreline.

Construction:

The wastewater treatment equipment and water storage tanks will be set up on site within a 1 – 2 week period. The installation of this equipment only requires the use of a small crane or boom truck to offload and place into position.

Initial civil work for paving and fencing will occur late October 2012 to early November 2012.

Following the civil work and prior to the installation of the water treatment equipment, office and material storage units for tools and equipment will be placed on site.

Operation:

The basis of the operation of this wastewater treatment operation includes the following key steps:

1. Coordinating acceptance of vessels to Port with source
2. Coordinating with SJPA

3. Connecting to vessels and removing dirty water
4. Treating water
5. Removing wastes

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

The system will be capable of treating wastewater contaminated with hydrocarbons and associated metals at a rate of 50gpm.

The following contaminants may exist in the wastewater and will require treatment:

Total Petroleum Hydrocarbon (TPH):	10 ppm to 50 ppm
Total Suspended Solids (TSS) - assumed:	150 mg/L – 250 mg/L
Solids Size - assumed:	90% > 50 microns
Metals:	Typically associated with hydrocarbons
Free oil:	may exist

Discharge water will meet the following discharge criteria as outlined in Schedule A and B of the Newfoundland and Labrador Treatment Environmental Control Water and Sewer Regulations.

All oil and solid waste streams removed will be disposed of using standard practices and handling procedures and only approved contractors will be used.

The wastewater treatment equipment does not use heat as part of the process therefore we do not anticipate the presence of any airborne emissions; however we will have a high efficiency air filter/stripper as part of the process in case.

Encanex will ensure that all personnel are trained and competent to perform the overall coordination and operation of this facility.

A detailed copy of the Operational Plan is included in Appendix E.

Emergency Response Plan

Encanex has established a site specific Emergency Response Plan that will protect its employees, the public and the environment. Specific site conditions will be addressed and appropriate contingencies will be implemented to mitigate all concerns. As a minimum, Encanex abides by all federal, provincial and municipal regulations relating to health,

safety and environmental protection. Encanex will meet with SJPA to review Emergency Response Plan to ensure all site specific information has been considered and included in plan. A copy of the plan is included in Appendix F.

Encanex is also working closely with Transport Canada to establish a Site Security Plan and will obtain a designation of an Approved Marine Facility.

Encanex will ensure that all personnel are trained to meet all regulatory requirements and those identified by SJPA to safely work on site.

Occupations:

There will be up to 5 new jobs created as a result of this project. These positions are required for initial equipment installation and eventual normal operations. The operation is considered full time and is expected to continue and provide employment for many years.

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

A listing of the occupations associated with this undertaking according to the National Occupational Classification 2011 (http://www5.hrsdc.gc.ca/noc/english/noc/2011/pdf/Printable_NOC2011_version_E.pdf) are as follows:

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

NOC 9243 – Water and waste treatment plant operators

NOC 2112 - Chemists

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

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

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

Project Related Documents:

A Baseline Environmental Site Assessment was completed by Pinchin Leblanc Environmental in September 2012. The study concluded that where detected, petroleum, PAH, VOC, and metal concentrations in soil were below applicable guidelines.

A copy of this report has been submitted to the Minister of Environment and Conservation.

4.0 Approval of the Undertaking

Encanex is working with the Department of Environment and Conservation to obtain the necessary permit to operate this Wastewater Treatment Operation.

Department contact information is as follows:

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

P.O.Box 8700, St. John's, NL, A1B 4J6
Tel: (709) 729-4124 Fax: (709) 729-6969

A copy of the guidelines for this permit application are attached in Appendix I.

5.0 Schedule

Encanex will be able to commence operation of the Wastewater Treatment Operation as early as January 1, 2013.

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

6.0 Summary

Encanex is committed to ensuring that this Wastewater Treatment Operation is managed with the upmost care for the surrounding environment and the employees that operate this equipment.

We are focused on meeting and exceeding the expectations of all parties and committed to the long term viability of this operation.

Sincerely,

Derek Bent, P.Eng.
Encanex Enterprises Limited
Senior Operations Manager / Engineer

APPENDIX A

CERTIFICATE OF CORPORATION AND INSURANCE

REGISTRY OF COMPANIES

Company No. 64232

Filed Nov. 04, 2011

Receipt No. 3342316

Registrar of Companies

NEWFOUNDLAND

THE CORPORATIONS ACT

REGISTERED

FORM 4

ARTICLES OF AMENDMENT
(Sections 54, 285)

1 - Name of Corporation	2 - Corporation No.
ENFUTEX SOLUTIONS CORPORATION	**64232**

3 - The articles of the above-named corporation are amended as follows:

The name of the corporation shall be changed to "Encanex Environmental Oil & Gas Corp."

Date	Signature	Description of Office
November 4, 2011		Solicitor

For Departmental use only

Filed -

[633677]

RECEIVED
NOV 04 2011
REGISTRY OF COMPANIES

GOVERNMENT OF
NEWFOUNDLAND AND LABRADOR
Department of Government Services

THE CORPORATIONS ACT
FORM 5

CERTIFICATE OF AMENDMENT

(Sections 279, 286)

Corporation Name: **ENCANEX ENVIRONMENTAL OIL & GAS CORP.**
Corporation Number: **64232**
Date of Amendment: **November 4, 2011**

I certify, as per the attached Articles of Amendment, that the Articles of Incorporation for this Corporation have been amended under the Corporations Act of Newfoundland and Labrador.

REGISTRAR OF COMPANIES
For Province of Newfoundland and Labrador
November 7, 2011

CERTIFICATE OF INSURANCE

CERTIFICATE HOLDER	BROKER
WORLEY PARSONS CANADA SERVICES LTD. **604-215 WATER STREET** **ST. JOHN'S, NL A1C 6C9**	**Alfred J. Bell & Grant Ltd.** PO Box 8 Halifax, NS B3J 2L4
INSURED	**INSURER**
ENCANEX ENVIRONMENTAL OIL & GAS CORP. 130 SOUTHSIDE ROAD ST. JOHN'S NL A1E 0A2	COMPANY A: CHARTIS INSURANCE COMPANY OF CANADA COMPANY B: COMPANY C: COMPANY D: COMPANY E:

COVERAGES:

This is to certify that the policies of insurance listed below have been issued to the insured named above and are in force at this date.

CO	TYPE OF POLICY	POLICY NUMBER	EXPIRY DATE(YMD)	LIMIT OF LIABILITY ALL LIMITS ARE IN CDN $'s
	☒ Commercial General Liability	15653135	2013/01/31	$5,000,000. Each Occurrence
	☐ Claims Made ☒ Occurrence			$5,000,000. General Aggregate
	☒ Products / Completed Operations			$5,000,000.
	☒ Non-Owned Automobile			$5,000,000.
	☒ Pollution Legal Liabilty			$5,000,000.CLAIMS MADE
	☒ Personal & Advertising Injury			$5,000,000.
	☒ Tenants Legal Liability			$300,000.
	☒ Medical Expense Limit			$25,000.

Description of operations / locations / vehicles/ other

RFQ No: 408009-9047

DRILLING DRAINS TREATMENT EQUIPMENT

CROSS LIABILITY CLAUSE: WITH RESPECT TO THE COMMERCIAL GENERAL LIABILITY POLICY ONLY, WORLEY PARSONS CANADA SERVICES LTD. IS ADDED AS ADDITIONAL INSURED BUT ONLY WITH RESPECT TO LIABILITY ARISING OUT OF THE OPERATIONS OF THE NAMED INSURED.

The insurance afforded is subject to the terms, conditions and exclusions of the applicable policy. This certificate is issued as a matter of information only and confers no rights on the holder and imposes no liability on the Insurer. This certificate does not amend, extend or alter the coverage afforded by the policies above. The Insurer will endeavor to mail the holder of the Certificate 30 days (15 days non-payment of premium) written notice on any material change in or cancellation of these policies, but assumes no responsibility for failure to do so.

Dated: AUGUST 15, 2012

Alfred J. Bell & Grant Ltd.
BELL & GRANT INSURANCE LIMITED
per _____
Authorized Representative/dmc
PER

APPENDIX B

ENCANEX POSH PROGRAM

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Encanex Enterprises Limited

Encanex Enterprises Limited is committed to conducting its activities in a manner that will safeguard the safety and health of its employees, customers, contractors, and the public, as well as protect the environment. This commitment is shared by all ***Encanex*** *employees, from the Senior Management to front line employees, and is exemplified by the discipline demonstrated by each member with regard to safe practices and procedures.*

We expect excellence in Safety, Health, and Environmental Performance to be achieved through the support and active participation of all. Employee input is critical to our success; management pledges to consult and cooperate with everyone, where practical, on all health and safety issues.

All levels of Management and Supervisory Staff are responsible and accountable for providing and maintaining a safe work environment with proper procedures, training, equipment, and programs. Managers, Supervisors, and Employees at all levels are held accountable for their adherence to Safety, Health, and Environment Protection procedures outlined herein.

Encanex takes pride in knowing that it complies with or exceeds standards set by all applicable federal and provincial and territorial laws, and recognized industrial safety practices. Encanex insists that all contractors comply too this same level of excellence in their work practices.

To ensure that this level of excellence is maintained Management will, in cooperation with the Safety Representative, conduct an annual review of the POSH Program and all Safety Policies.

Signature: _____ *Date:* _____

APPENDIX C

ENCANEX EMS PROGRAM

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APPENDIX D

ENCANEX ISO 9001:2008 PROGRAM

CERTIFICATE OF REGISTRATION

Management Certification
MCNA
of North America

This is to certify that the
Quality Management system of:

Encanex Enterprises Limited

6 Long Lake Drive
Halifax, NS B3S 1T4
Canada
has been assessed and found complying with the requirements of

ISO 9001:2008

Approval is hereby granted for registration providing the
Certification rules and conditions are observed at all times.

Certification Scope:

Manufacture, repair, and refurbishment of intermodal containers and offshore cargo equipment

Certificate Number: 0303092

Revision Date: 31 Jan 2012

Audit Date: 29-Oct-2010

Original Registration Date: 8-Nov-2007

Expiration Date: 6-Nov-2013

Thomas W. Hamm

On Behalf of:
Management Certification NA

ANAB ACCREDITED

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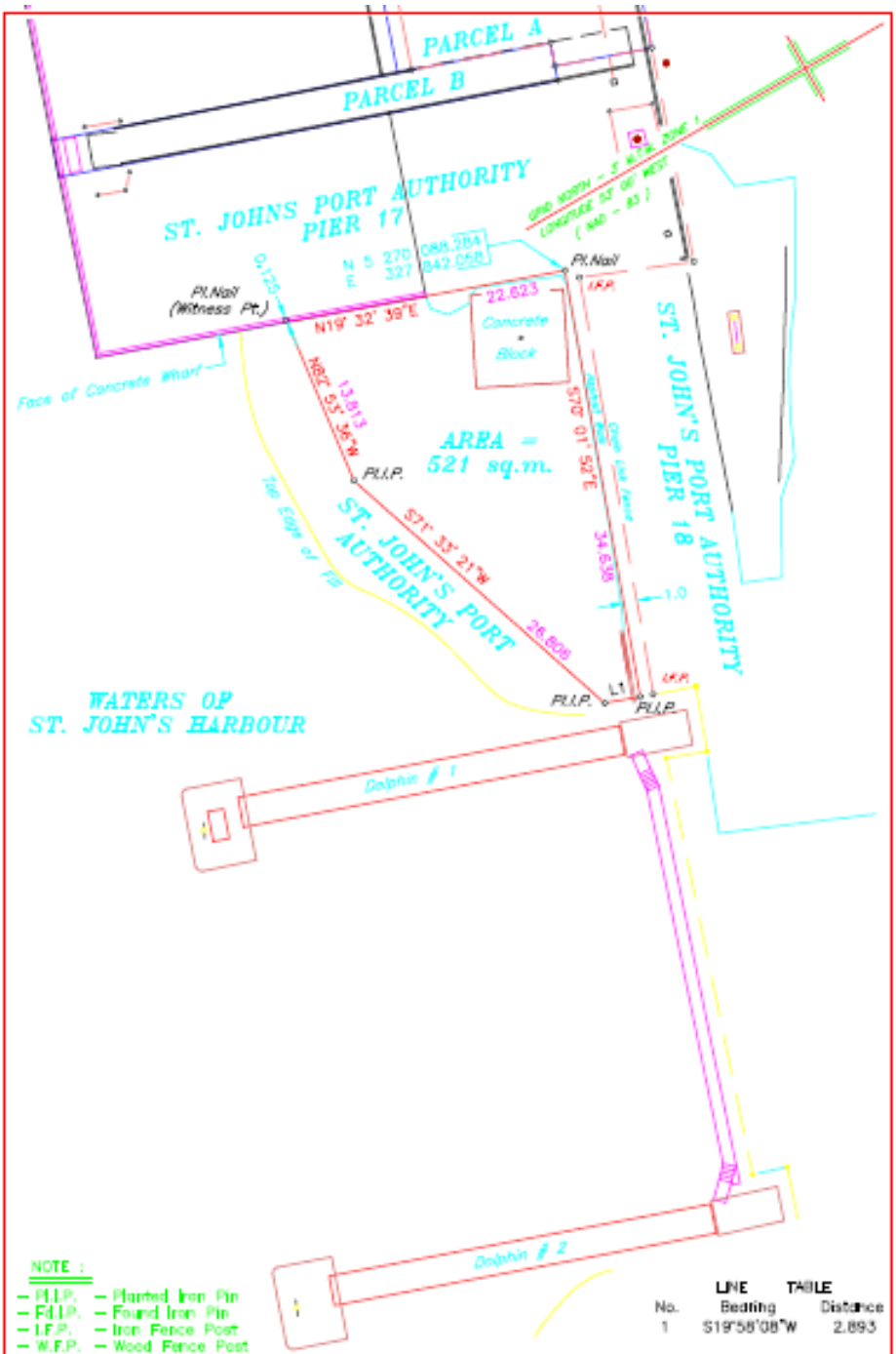
APPENDIX E

SURVEY PLOT



NOTE :

– Pl.I.P. – Planted Iron Pin
– Fd.I.P. – Found Iron Pin
– I.F.P. – Iron Fence Post
– W.F.P. – Wood Fence Post
– All Distances are Horizontal Ground Distances.
– Coordinates by GPS from Reference Monument : 80G2260 – N 5 268 671.422
E 326 266.220
– Scale factor at starting point – 0.999904

LINE TABLE

No.	Bearing	Distance
1	S19°58'08"W	2.893

M. R. DUFFETT & ASSOCIATES LIMITED
Newfoundland Land Surveyors
St. John's , Newfoundland
Bus : (709) 739–5555 Fax : (709) 739–5575

Property Survey
Leased Land for ENCANEX
PIER 17–EAST ST. JOHN'S HARBOUR ST. JOHN'S, NL.

SCALE : 1 : 400	JOB No. : 8026–471–12
DATE : September 21, 2012	SURVEY : M.D. & B.S.

APPENDIX F

OPERATIONAL PLAN

ENVIRONMENTAL MANAGEMENT SYSTEM DOCUMENTATION

DOCUMENT NAME:

WATER TREATMENT SYSTEM OPERATIONAL GUIDELINES

FILE IDENTIFIER: EN-11
ISSUE DATE: AUGUST 2012
REVISION # : 0
REVISION DATE:

PREPARED BY

APPROVED BY

REVISION HISTORY

REVISION #	REVISION DATE	NATURE OF REVISION

Water Treatment Services

Water Treatment System Operational Guidelines

TABLE OF CONTENTS

1 PURPOSE

To identify operational guidelines for a water treatment facility to aid management and staff with the understanding of required equipment and also each step in the process of day-to-day operation of the facility.

2 MANAGEMENT AND STAFF ROLES

2.1 Regional Manager

Responsible for the complete operation of the water treatment facility, administering and ensuring training and compliance to Operational Plans and Emergency Response Plans. Responsible for continuous improvement efforts and overall site performance.

2.2 Site Supervisor

Responsible for coordinating day-to-day operation of the facility to ensure work is completed safely and effectively. The site supervisor will be responsible to ensure all other staff adhere to company policies and procedures.

2.3 Chemist

Responsible to ensure discharge levels meet all requirements outlined in permits and approvals. They will also test recovered oil and solids to determine appropriate disposal methods outline in the applicable standards.

2.4 Technician

Responsible for operating the equipment on site. They will have the knowledge to make required changes in the facilities operation and adjust to changes as required.

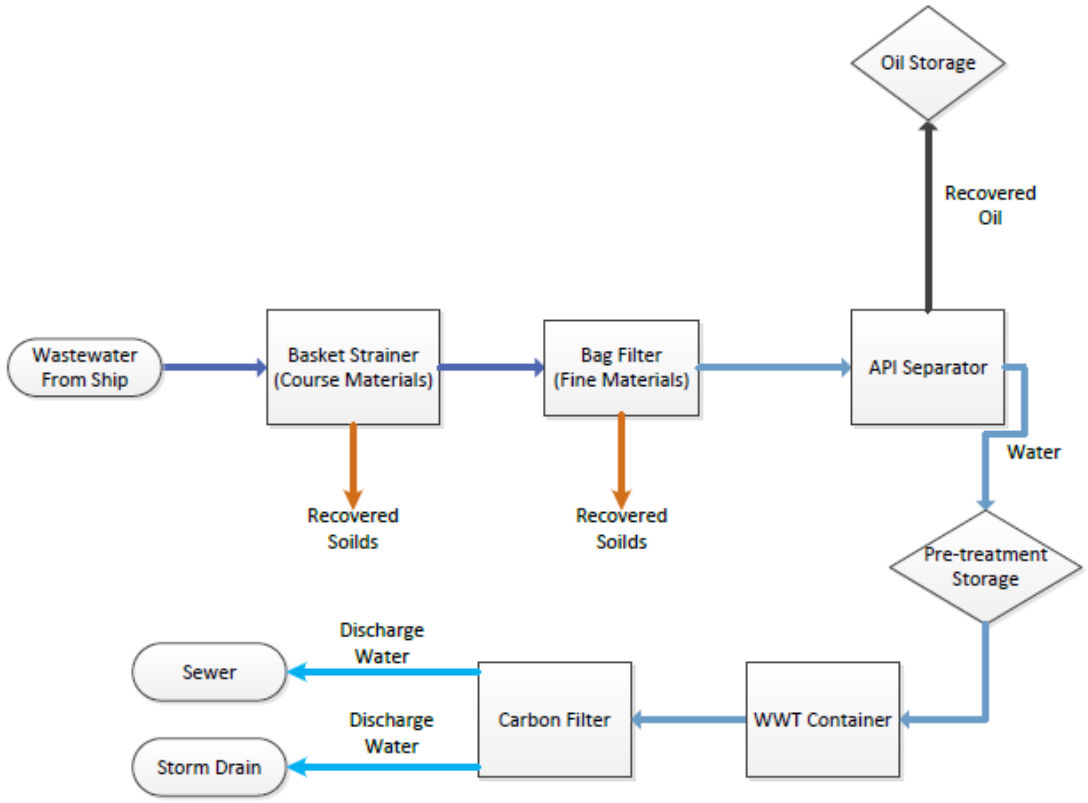
3 EQUIPMENT SETUP & OPERATIONS

3.1 General Equipment Setup & Operation

Prior to connection of the piping, all equipment will be setup and secured to prevent movement during operation and periods of harsh weather. Ensure all equipment is in secure and correct position for connection of piping.

All equipment will be setup to allow for ease of operational and maintenance procedures. The vessel tank cleaning and wastewater treatment will be two processes completed on site and these processes will be arranged in a manner to allow for simultaneous operation.

3.2 Typical Operational Flow Diagram



3.3 Typical Operational Procedure

3.3.1 Waste Water Treatment

1. Ship arrives at dock
2. Wastewater from the ship is transferred to land via piping (Greater than 250 psi rating with hammer lock fittings)
3. Wastewater goes through our pre-filtration before being transferred to an API Separator
4. Oil and water is separated using an API Separator
5. Oil is sent to storage to wait for transportation
6. Water from the API Separator is sent for further filtration in the waste water treatment process

7. Water is discharged meeting the requirements outlined in Newfoundland and Labrador Regulation 65/03

4 EQUIPMENT DESCRIPTION

4.1 Moduview™/Modustore™

Encanex's onsite coordinator and team will utilize the Moduview™/Modustore™ onsite for project management units/system. This facility brings many advantages to onsite project management including ease of view of onsite activities, security, onsite storage and enhanced communication.

4.2 Coarse Material Filter

This is the first step of two in the pre-filtration process, it will remove all course materials from the wastewater stream. Coarse material can consist of rocks and foreign objects such as workers gloves, these course materials are required to be removed to ensure an upset to the system do not occur downstream.

4.3 Bag Filter

The second step in the pre-filtration process is the removal of fine materials from the wastewater. If not removed these fine materials can cause a problem downstream in the final stages of filtration, it may cause adsorption material to bind together which causes flow problems throughout the system.

4.4 Modutank™

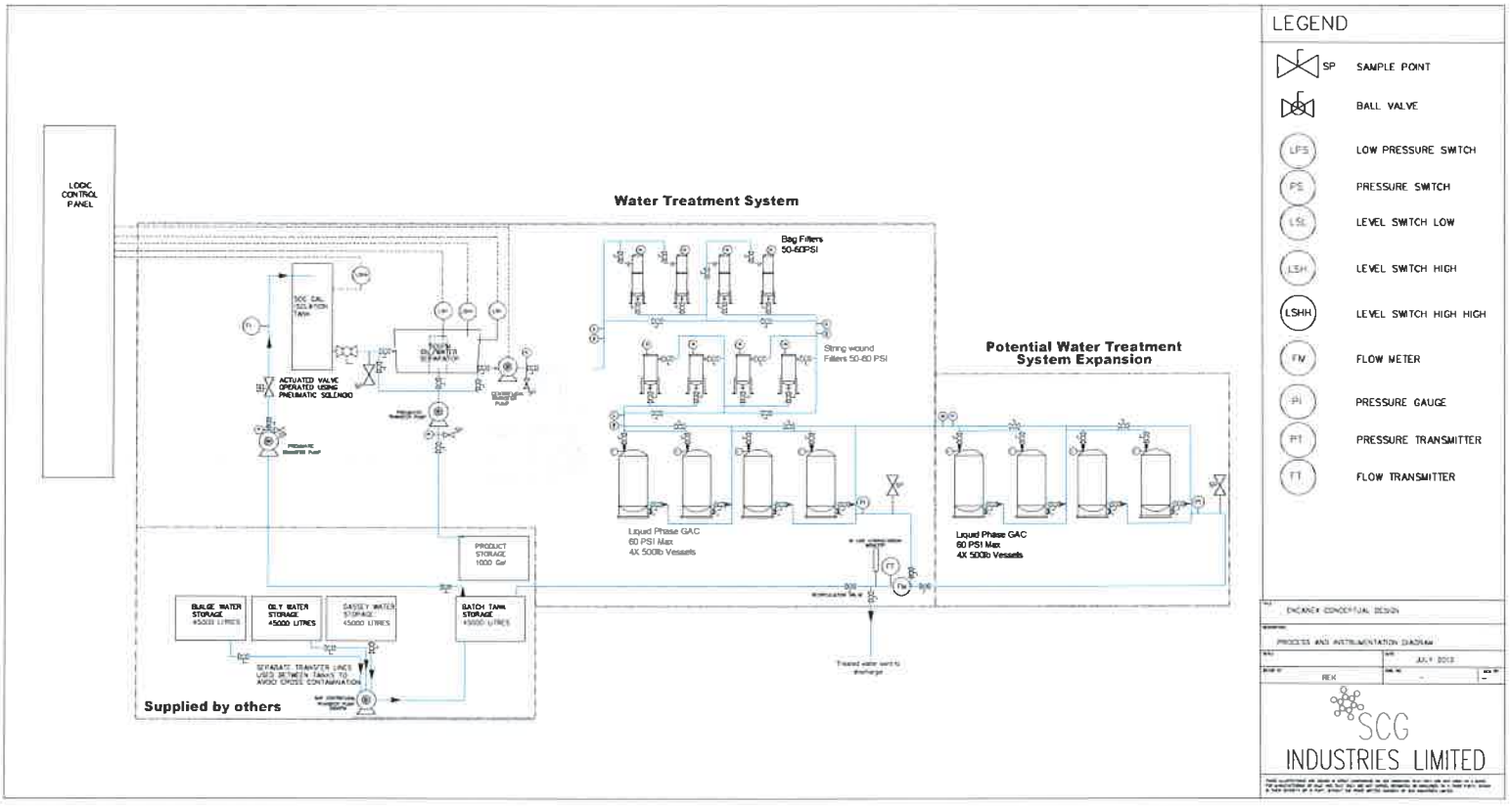
Encanex's Modutank™ system is designed for the storage of all onsite bulk liquids. At this site the Modutank™ will be used for the storage of wastewater, separated oil and treated water.

4.5 API Oil-Water Separator

This system is designed to use gravity and specific gravity of the liquids to separate a wastewater stream into two distinct layers, an oil layer and a water layer. The liquid with the lowest specific gravity will be on top in this case, the oil will be on top of the water layer because of a lower specific gravity then water. This oil will be skimmed off and sent to bulk oil storage for testing to determine if it can be recycled and if not the appropriate method for disposal. The wastewater is then sent for further treatment.

4.6 Activated Carbon Adsorption Filter

This is the final treatment process before the water is discharged into appropriate locations. The residual dissolved organics/hydrocarbons in the water (including dissolved solids and other turbidity causing organic compounds) are efficiently removed from the water resulting in clear, uncontaminated discharge water. The removal of the residual dissolved organics/hydrocarbons is achieved through a process called adsorption. Adsorption occurs when molecules of dissolved compounds are electrically attracted to carbon surfaces and are effectively held there. The electric forces on the carbon surface attract the contaminants molecules more strongly than the water in which they are dissolved. In general larger and more branched molecules and those less soluble in water, such as chlorinated hydrocarbons, are more readily adsorbed and retained. The treated water will be tested to ensure it will meet required discharge levels outlined in Newfoundland and Labrador Regulation 65/03.


LOGIC CONTROL PANEL
Water Treatment System
Bag Filters 50-60PSI
String wound Filters 50-60 PSI
Potential Water Treatment System Expansion
ACTUATED VALVE OPERATED USING PNEUMATIC SOLENOID
Liquid Phase GAC 60 PSI Max 4X 500lb Vessels
Liquid Phase GAC 60 PSI Max 4X 500lb Vessels
PRODUCT STORAGE 1000 Gal
BILGE WATER STORAGE
OILY WATER STORAGE 45000 LITRES
BATCH TANK STORAGE
SEPARATE TRANSFER LINES USED BETWEEN TANKS TO AVOID CROSS CONTAMINATION
Supplied by others
LEGEND
SP SAMPLE POINT
BALL VALVE
LFS LOW PRESSURE SWITCH
PS PRESSURE SWITCH
LSL LEVEL SWITCH LOW
LSH LEVEL SWITCH HIGH
LSHH LEVEL SWITCH HIGH HIGH
FM FLOW METER
PI PRESSURE GAUGE
PT PRESSURE TRANSMITTER
TT FLOW TRANSMITTER
ENDANCE CONCEPTUAL DESIGN
PROCESS AND INSTRUMENTATION DIAGRAM
JULY 2013
REK
SCG
INDUSTRIES LIMITED

APPENDIX G

EMERGENCY RESPONSE PLANS

encanex

Emergency Response Plan For the Operation of a Wastewater Treatment/Recycling Facility at Pier 17, St. John's, Newfoundland

Version 1, August 2012

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1. PURPOSE AND SCOPE

This Emergency Response Plan provides operating guidelines to meet emergencies that may arise during the performance of the services that will be provided by Encanex during the operation of a wastewater recycling system to be utilized during supply vessel cleaning at the Pier 17, St. John's, Newfoundland.

The objectives of the Emergency Response Plan are to enable Encanex to respond to all emergency situations, and to minimize Encanex's exposure to loss and any impacts on the environmental from such situations. This objective will be met by providing for:

a. the safety of employees, contractors and the public;
b. an effective incident reporting system; and
c. minimizing damage to the environment, equipment and facilities.

The Emergency Response Plan will be reviewed and updated annually and all revisions will be in accordance with Encanex's Program for Occupational Safety and Health and will follow the normal approval process.

The Senior Operations Manager has the responsibility of administering the Emergency Responsibility Plan.

2. NOTIFICATION AND ALERTING AUTHORITIES

Encanex's policies regarding fire, spills and injury are to limit damage to persons, property and the environment to the fullest extent possible. Given these policies, emergencies will be declared if any of the following occur:

1. a leak or spill;
2. fire or explosion; and
3. serious injury or loss of life.

Appropriate emergency procedures must be initiated immediately after discovery that an emergency exists.

2.1 Authorities & Resources: Service Information

In the Province of Newfoundland there are two principle levels of police authorities, the RCMP and/or municipal police forces, which can respond to incidents involving death, sabotage, fire, explosion or criminal offence.

The St. John's Regional Municipality Fire Department(s) are equipped to handle/assist in numerous potential incidents such as chemical spills, confined space rescue, etc.

All spills of chemicals or other harmful substances into water bodies are to be reported to the Canadian Coast Guard. The Coast Guard has a variety of response equipment and may be capable of assisting in most spill incidents.

In addition, the East Coast Response Corporation (ECRC) is a private/industry partnership that is capable of responding to any major spills into the St. John's Harbour. ECRC possesses a wide variety of equipment and personnel that may be utilized in the event of a spill incident.

2.2 Hospitals and Relevant Information

There are numerous hospitals and medical clinics that support the communities throughout Newfoundland. The smaller facilities can provide the majority of aid and support in the initial stages of an emergency. The larger hospitals situated throughout the Province can provide triage and stabilization for injured workers. If necessary, they can co-ordinate transfer of casualties to major centers for advanced medical aid. The following is a list of hospitals located throughout the St. John's Regional Municipality:

St. John's Regional Municipality Health Care Centres		
Facility	**Location**	**Telephone Number**
St. Clare's Mercy Hospital	154 LeMarchant Road, St. John's	(709) 777-5500
Health Sciences Centre	300 Prince Phillip Drive, St. John's	(709) 777-6300
Dr. Leonard A. Miller Centre	100 Forest Road, St. John's	(709) 777-6555
Dr. H. Bliss Murphy Cancer Centre	300 Prince Phillip Drive, St. John's	(709) 777-6555
Major's Path Clinic	35 Major's Path, St. John's	(709) 752-3687
Janeway Children's Health and Rehabilitation Centre	300 Prince Phillip Drive, St.John's	(709) 777-6300
Shea Heights Community Clinic	57B Linegar Ave., St. John's	(709) 752-4301
Waterford Hospital	306 Waterford Bridge Road, St.John's	(709) 777-3300

2.2.1 Ambulance Service

There are a number of organizations providing ambulance service throughout Newfoundland. Most can provide advanced life support for transfer to hospitals.

2.3 Emergencies Measures Organizations

The Provincial and Federal departments along with Emergencies Measures Organization (EMO) and other agencies would act in the main co-coordinating and leadership role in the event of an incident requiring emergency response. They can provide the overall co-ordination of activities as well as many of the direct response services.

CANUTEC provides emergency response information in the event of a spill or release of potentially hazardous materials/chemicals. CANUTEC is able to provide information concerning the level and nature of hazard present as well as giving recommendations as to evacuation, first aid, spill containment and clean-up procedures.

The jurisdiction of the level of government on which the environmental emergency has occurred will dictate the appropriate government agencies to contact; Environment Canada is responsible for environmental maters on federal properties; each provincial department of environment is responsible for environmental matters on provincial properties; and each municipal government is responsible for environmental matters on its own municipal properties. Each of these agencies will be able to indicate the appropriate contacts in the government departments ultimately responsible for the properties on which the emergency has occurred (i.e., Transport Canada, provincial department of forestry, etc.).

In the event of a large-scale emergency, one that endangers the health and safety of a municipality, the Emergency Measures Organization (EMO) will be contacted. The EMO is an Organization which assists Newfoundland municipalities in developing their emergency response plans and provides emergency response training for municipality's workers. In the event of an emergency, the EMO will assist a municipality with the implementation of its response plan.

In Newfoundland spill response services and equipment will be augmented by private companies providing emergency spill response services.

3. AUTHORITIES & RESOURCES: ALERTING INFORMATION

In the event of an emergency requiring the involvement of emergency response services the following list of organizations will be contacted, as required, at the corresponding telephone numbers.

3.1 Internal Contacts

1. Alton Payne, President	(902) 454-9318 (work) (902) 222-1731 (cell)
2. William Brown, Director of Operations and Finance	(902) 454-9318 (work) (902) 448-3466 (cell)
3. Derek Bent, Senior Operations Manager	(902) 454-9318 (work) (902) 401-9126 (cell)
4. Ryan Cull, NL Regional Manager, Project Manager	(709) 739-9493 (home) (709) 687-8728 (cell)
5. Brett Payne, Operations Supervisor	(902) 454-9318 (work) (902) 830-0787 (cell)

3.2 External Contacts

1.	Emergency calls (Northeast Avalon & Corner Brook) – fire, police, ambulance (Remainder of Province)	911[A] As appropriate
2.	Coast Guard (24 hour):	709-722-2083 800-563-9089
3.	CANUTEC – dangerous goods information:	613-996-6666
4.	Environment Canada:	709-772-7745
5.	Environment Canada Newfoundland (24 hour):	800-563-9089
6.	Emergency Measures Organization (24 hour):	709-729-0918
7.	Municipal Government Representative:	As appropriate
9.	Occupational Health and Safety:	709-729-5548 800-563-5471
10.	Workers Compensation:	709-778-1000 800-563-9000

THE ON-SCENE COMMANDER (OSC)

The supervisor on site at the time of any emergency is charged with the evaluation and immediate response to rectify the situation or activate the Emergency Response Procedures.

In the event the Supervisor leaves the site for any reason other than the end of his shift, he must notify another available individual to assume the responsibilities of Emergency Response Coordinator.

Please note that the OSC is not responsible for any public relations functions. Any requests for public information are to be directed solely to the President, unless otherwise specified.

4. EMERGENCY RESPONSE PROCEDURES

Encanex Environmental has separate contingency guidelines for the three forms of emergency that may occur. The guidelines, for the discovery of a spill, in the event of an explosion and in the case of an injury, are as follows:

4.1 Upon Discovery of a Spill/Leak

Encanex's spill and/or leak policy is to ensure prompt and approved action to contain all waste spills and to ensure the safe disposal of spill clean-up materials.

4.1.1 OSC Guidelines

Upon the discovery of a spill and/or leak the OSC shall:

a. evaluate the potential risk to health and safety;
b. sound an emergency warning (if necessary) and suspend operations;
c. initiate evacuation (if necessary);
d. take appropriate action in the event of an injury;
e. contain spill or leak if possible;
f. activate the Crisis Communication Schedule (see Section 8.4) as required to notify appropriate internal personnel and external organizations (i.e. Canadian Coast Guard, Department of Environment, etc.);
g. refer to the MSDS or Waste Profile Sheet for information on spilled substance;
h. co-ordination clean up and ensure that all materials are placed in appropriate containers and properly labeled for future disposal; and
i. complete an Incident Report;
j. provision should be made for "media contacts" in the form of public notices of a hazardous condition, if necessary.

4.1.2 Management Guidelines

Upon being advised of a spill or leak Management shall:

a. evaluate the spill or leak and escalate the response as required;
b. organize the response team;
c. confirm the identification of the spilled material;
d. for spills on or into water bodies notify the Canadian Coast Guard at 709-722-2083 (regardless of the quantity of material spilled); and
e. complete an Incident Report.

4.1.3 Response Personnel Guidelines

Upon being advised of a spill or a leak Response Personnel shall:

a. don necessary protective equipment;
b. contain the spill with appropriate equipment;
c. recover liquids if possible, and otherwise package any affected debris; and

d. collect soil samples from the area affected by the spill to determine the effectiveness of the containment and clean up.

4.1.4 General Spill Clean-up Procedures

The only chemical/environmentally harmful substance that will be handled by Encanex during its operations is hydrocarbon contaminated liquids such as drilling muds, bilge water, wash water, etc. Items such as caustics, acids, or other chemicals will not be utilized during operations.

During operations, Encanex's recycling system will be located inside a concrete secondary containment dyke capable of containing 110% of the maximum liquid volume of the system. Liquids will only enter/leave the treatment system via transfer hose. The only source of a potential uncontrolled spill of hydrocarbon contaminated material would occur in the event of a transfer hose failure. This may result in hydrocarbon contaminated materials being spilled into the St. John's Harbour or the adjacent onshore work area.

During the transfer of liquids continuous visual monitoring of the transfer line is performed to ensure there are no leaks or problems. In the event of a major failure in the transfer hose a maximum of 300 liters of hydrocarbon contaminated water could be potentially released to the environment. This is based on a maximum pumping rate of 300 liters/minute and a response time of 1 minute to shut down the pump. Because of the limited areas of the proposed operations, a 1 minute response time would be more than sufficient to shutdown the transfer pump.

In addition, a boom will be placed around all vessels during ship to shore transfer operations.

4.1.4.1 Assessment & General Response

In dealing with any form of spill, the first priority is to assess the situation in order to respond safely and effectively. Proper assessment includes:

- identification of spill material (i.e. type of hydrocarbon)
- perform onsite evaluation and acknowledge any visible hazards which could worsen the situation (i.e. ignition sources, open catch basins);
- determination of appropriate PPE equipment is required to safely deal with the spilled material (i.e. respirator with mercury vapour cartridges); and
- select the appropriate spill kit resources to adequately contain and absorb spilled material.

The general response to a spill incident is as follows:

- Contain the spill.
- Initiate Spill Cleanup.
- Assess quantity of spill and area affected.
- Refer to MSDS or outside agencies (CANUTEC etc) for information on spill substance and clean-up.
- Evaluate appropriate clean up technology and material (vermiculite, sand etc.) based on product properties etc.
- Notify appropriate personnel and agencies (i.e. Canada Coast Guard, Department of Environment, etc.)
- Complete Incident/Accident Report.

4.1.4.2 Hydrocarbon Material Spills on Land

1. Evaluate the magnitude and nature of the spill (i.e. volume, liquid material, drilling mud solids, etc.).
2. Spread granular oil absorbent or absorbent socks around the perimeter of the spill to prevent migration.
3. Use oil absorbent pads to clean up the spill or use enough granular absorbent to completely cover the spill and allow to absorb for a short time.
4. Sweep up residue with broom and shovel and place into waste drum.
5. In the event of larger spills contact local vacuum truck company (i.e. Crosbie Industrial) to assist in the removal of contaminated materials.

Extra precautions:

- Remove all sources of ignition to prevent fires.

4.1.4.3 Hydrocarbon Material Spills on Water

1. Evaluate the magnitude and nature of the spill (i.e. volume, liquid material, drilling mud solids, etc.).
2. Determine if spilled material has the potential to escape from the boom around the vessel (for vessel to shore operations).
3. Use oil absorbent material, oil skimmers, containment booms, etc. to contain and clean up free product.
4. Use oil absorbent pads to remove any sheens/residual hydrocarbons.
5. Place all waste materials into appropriate drums for disposal.
6. In the event of larger spills contact local response companies (i.e. ECRC, SERVO Environmental Solutions Inc., etc) to assist in the containment and removal of contaminated materials.

4.2 Upon the Discovery of a Fire or in the Event of an Explosion

4.2.1 OSC Guidelines

Upon the discovery of a fire or in the event of an explosion the OSC shall:

a. sound an emergency warning;
b. suspend operations;
c. assess whether evacuation is necessary and initiate evacuation procedures (if necessary);
d. take appropriate action in the event of injury;
e. ensure that all personnel are accounted for and out of danger;
f. activate the Crisis Communication Schedule (see Section 7.3) as required; and
g. provision shall be made to cut off all electrical power if necessary;
h. complete an Incident Report.

4.2.2 Management Guidelines

Upon being advised of a fire or explosion Management shall:

a. assess the emergency and the additional manpower and equipment requirements. Ensure all necessary actions are taken to control the emergency; and

b. complete an Incident Report.

4.3 Upon the Discovery of an Injury

4.3.1 OSC Guidelines

Upon the discovery of an injury the OSC shall:

a. co-ordinate first aid for the injured;
b. suspend operations;
c. activate the Crisis Communication Schedule (see Section 7.3) as required;
d. ensure unobstructed access for emergency response personnel;
e. receive and direct emergency response personnel to the accident site;
f. preserve and protect the accident site until investigations are complete;
g. arrange for security coverage depending on the severity of the accident; and
h. complete an Incident report.

4.3.2 Management Guidelines

Upon being advised of an accident causing injury Management shall:

a. arrange for transportation of injured personnel to hospital; and
b. complete and Incident Report and any government reports required.

5. RESTORATION OF SPILL SITE

Post incident evaluation shall occur after every occurrence and exercise of the plan. Based on the incident report or exercise evaluation, modifications or recommendations will be generated for consideration and implementation. In the event of a spill, Encanex will attempt to restore the site to its original condition and/or remediate the area to an applicable standard satisfactory to the Newfoundland Department of Environment.

6. INFORMATION ON DISPOSAL OF CONTAMINANTS

Following the emergency response procedures outlined for the discovery of a spill or leak, appropriately containerized and properly labeled contaminants shall be securely stored for future disposal in accordance with all applicable legislation and guidelines.

The transportation of hydrocarbon contaminated materials will be performed by licensed contractors authorized to transport waste within the province of Newfoundland.

Disposal and/or treatment of contaminated materials will be conducted through licensed facilities, landfills and/or by permitted technologies as applicable. Applicability shall be based upon several factors, including: 1) the urgency dictated by the hazard presented by the stored material, i.e., its stability, toxicity, etc.; 2) the feasibility of disposal and/or treatment options based upon their availability, as well as, seasonal factors, etc.; and 3) the question of legal responsibility, if applicable.

7. RESOURCE INFORMATION

7.1 Personnel Training

Training is an important part of any safety program. It ensures employees have the required skills and knowledge to work properly and safely. Encanex's Safety Officer is responsible for the coordination of all employees training as well as the maintenance of the employee training program. The coordination of job specific training is the responsibility of the Project Manager. The Project Manager is also responsible for advising Encanex's Safety Officer of any employee training conducted onsite in order to ensure that all employee training records are up-to-date and accurate.

7.2 General Safety Requirements

Encanex ensures that all employees participate in the following ongoing safety training forums:

- Safety orientations for all new hires
- Job-specific training as required.
- Health and Safety meetings(at least weekly)
- Site Orientation Meetings

Every Encanex employee must complete the required training programs to assure that they receive an appropriate level of environmental, health and safety training as well as job-specific training. Additional training is based on whether or not the employee is classified as non-supervisory, casual, or supervisory.

As a minimum all project engineers and senior supervisors must undergo training in the 40-hour contaminated sites health and safety course as recognized by the U.S. E.P.A. (29CFR 1910.120, "HAZWOPER"). Refresher training for the HAZWOPER course is performed every 2 years.

Training of Encanex employees is provided through a combination of in-house training programs and third party safety training companies such as the Newfoundland Construction Safety Association (NLCSA).

7.2.1 Non-Supervisory Employee Training

A minimum standard for full time non-supervisory employees is:

Minimum Training:

- Company & Safety Orientation
- Site Orientation
- Safe Work Practices
- Job Procedures
- Job-Specific Training (as Required)
- WHMIS
- Basic Emergency Response
- Personal Protection Equipment
- Regulatory Awareness

Additional Training (depending on position and type of work):

- 40 Hour Contaminated Site Health & Safety Training
- First Aid/CPR
- Transportation of Dangerous Goods
- Confined Space Entry
- Fall Protection
- Excavation Safety
- H_2S Safety & Recognition
- Selection, Use & Maintenance of Respiratory Protection
- SCBA & SABA Training
- Identification & Classification of Hazardous Waste
- Labpacking of Hazardous Wastes
- Principles of Fire Fighting
- Safe Use of Compressed Gas Cylinders
- Handling & Using Flammable Liquids
- Forklift Operations

7.2.2 Casual Employees Training

Casual employees that are only hired for short periods of time (less than two weeks) are to be given task-specific training. Minimum training for casual employees includes:

- task-specific safety
- site orientation
- site emergency response
- PPE operation & Maintenance
- WHMIS

Casual employees must be under the immediate and direct supervision of a fully trained full time employee. Casual employees must not perform other tasks without additional training. Casual employees are to sign acknowledgment form stating that they have received training for a specific job.

7.2.3 Supervisory Staff

A minimum standard for full time supervisory employees is:

Minimum Training:

- Company & Safety Orientation
- Regulatory Awareness
- 40 Hour Contaminated Site Health & Safety Training
- WHMIS
- First Aid/CPR
- Basic Emergency Response
- Personal Protection Equipment
- Transportation of Dangerous Goods

- Confined Space Entry
- Fall Protection
- H2S Safety & Recognition
- Selection, Use & Maintenance of Respiratory Protection
- SCBA & SABA Training

Additional Training (depending on position and type of work):

- Leadership for Safety Excellence
- Principles of Loss Control
- Principles of Loss Control (PLC) Audit
- Safety Orientation
- Excavation Safety
- Construction Safety Officer (CSO)
- Identification & Classification of Hazardous Waste
- Labpacking of Hazardous Wastes
- Safe Use of Compressed Gas Cylinders
- Handling & Using Flammable Liquids
- Principles of Fire Fighting

7.2.4 Training Schedule

All employees must undergo Encanex's Specific Training program (if required for employment) before entering a job site and commencing work. This initial training should be scheduled and completed within 1-2 weeks of the new employee's starting date or before engaging in activities involving Encanex's equipment/processes.

Training Schedule

Training	Training/Refresher Schedule
Company & Safety Orientation	Upon Hiring
WHMIS	Annually
Basic Emergency Response	Upon Hiring
Personal Protection Equipment	Upon Hiring
Regulatory Awareness	Upon Hiring
First Aid	Every 3 years
CPR	Annually
Transportation of Dangerous Goods	Every 3 years
Confined Space Entry	Every 2 years
Fall Protection	Every 3 years
Excavation Safety	Every 3 years
H_2S Safety & Recognition	Every 3 years
Selection, Use & Maintenance of Respiratory Protection	Fit Testing - Annually
SCBA & SABA Training	Every 2 years
Identification & Classification of Hazardous Waste	Every 3 years
Labpacking of Hazardous Wastes	Every 3 years
Principles of Fire Fighting	Every 2 years
40 Hour Contaminated Site Health & Safety Training	Every 2 years
Leadership for Safety Excellence	- (see note)
Principles of Loss Control	- (see note)
Principles of Loss Control (PLC) Audit	- (see note)
Safety Orientation	- (see note)
Construction Safety Officer (CSO)	- (see note)

Note: These training courses are normally completed within 4 - 6 months of hire/promotion to a Supervisor position and/or the establishment of a requirement for the training.

7.3 Emergency Response Equipment

7.3.1 Personal Protective Equipment (PPE)

The basic minimal PPE that should be worn at all times while performing any tasks includes the following:

1. hard hat;
2. safety glasses with side shields or splash goggles;
3. PVC gloves and coveralls; and
4. Safety boots.

In addition to the above, all personnel should have a safety bag containing the following items:

1. half-mask respirator with organic vapour cartridges;
2. replacement and specialty cartridges;
3. face shield;
4. tyvex suits and PVC rain suit; and
5. rubber steel toed boots.

7.3.2 Occupational Health & Safety Materials Supplier

Company: Archer Industrial
Contacts: Robert Stone
Title: Owner/Operator
Address: 1124 Topsail Road
P.O. Box 8191
St John's NF
A1B 3N4

Tel: Business (709) 747-3099
24 Hour Emergency #709-738-0239
Fax: (709) 747-3098

7.3.3 Emergency Response Equipment and Supplies

A spill kit will be accessible at all times. The minimum contents of a spill kit will be as follows:

General Purpose Spill Kit:
4 - 3" x 48" General Purpose Socks;
4 - 3" x 10" General Purpose Socks;
4 - 3" x 48" Acid/Base Socks;
4 - 3" x 10" Acid/Base Socks;
10 - 17" x 19" Double Weight Pads;
1 - 18" x 18" x 2" Pillow;
5 kg of granular absorbent;
1 kg of citric acid;
1 kg of sodium bicarbonate;
5-Heavy Duty Disposable Bags;
2-Pairs of Chemical Resistant Disposable Coveralls;

5-Pairs of Nitrile Gloves;
1-Pairs of Goggles or Safety Glasses;
1-Half-Face Air Purifying Respirator with Organic Vapour/Acid Gas cartridges; and
1-Emergency Response Guide.

7.4 Crisis Communications Schedule

Encanex Environmental personnel responding to an emergency shall follow emergency response procedures previously outlined. At the appropriate stage of the response procedures the Crisis Communication Schedule is to be activated. In the event of an emergency characterized by immediate and urgent danger, emergency response personnel in 1) below should be notified. Otherwise, the people/organizations following 2) → 14) are to be notified as required. Each person notified will discuss the situation with the person providing the notice and the two will jointly decide if the notification process should escalate.

1.	Emergency calls (Northeast Avalon & Corner Brook) – fire, police, ambulance (Remainder of Province)	911[A] As appropriate
2.	Alton Payne, President	(902) 454-9318 (work) (902) 222-1731 (cell)
3.	William Brown, Director of Operations and Finance	(902) 454-9318 (work) (902) 448-3466 (cell)
4.	Derek Bent, Senior Operations Manager	(902) 454-9318 (work) (902) 401-9126 (cell)
5.	Ryan Cull, NL Regional Manager, Project Manager	(709) 739-9493 (home) (709) 687-8728 (cell)
6.	Brett Payne, Operations Supervisor	(902) 454-9318 (work) (902) 830-0787 (cell)
7.	Coast Guard (24 hour):	709-722-2083 800-563-9089
8.	CANUTEC – dangerous goods information:	613-996-6666
9.	Environment Canada:	709-772-7745

10.	Environment Canada Newfoundland (24 hour):	800-563-9089
11.	Emergency Measures Organization (24 hour):	709-729-0918
12.	Municipal Government Representative:	As appropriate
13.	Occupational Health and Safety:	709-729-5548 800-563-5471
14.	Workers Compensation:	709-778-1000 800-563-9000

Federal Government Legislation:

- Transportation of Dangerous Goods Act
- Canadian Drinking Water Quality Guidelines
- Canadian Environmental Protection Act.
- Hazardous Products Act
- Hazardous Materials Information Review Act
- National Fire Prevention Association Standard (e.g., NFPA No. 30 "Flammable and Combustible Liquids Code")
- Environmental Emergency (E2) Regulations
- Fisheries Act

Provincial Legislation

- Occupational Health and Safety Act
- Occupational Health and Safety Regulations
- Occupational Health and Safety First Aid Regulations
- Workplace Health, Safety & Compensation Act
- WHMIS Regulations
- Environment Act
- Clean Environment Act
- Waste Materials Disposal Act
- Waste Management Act
- Waste Management Regulations
- The Storage and Handling of Gasoline and Associated Products Regulations
- Fire Prevention Act
- Fire Prevention Flammable and Combustible Liquids Regulations
- Fire Prevention Regulations

Other:

- API Standard 2015: "Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks".
- API RP 2016: "Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks"
- API RP 2003: "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents"
- Safety Guidelines for Tank Vessel Cleaning Facilities
- North American Emergency Response Guidebook

Other:

- CSA-Z180.1: "Compressed Breathing Air and Systems"
- CSA-Z94.3: "Eye and Face Protectors"
- CSA Special Publication 1156: "Fall-Arrest Systems — Practical Essentials"
- CSA-Z259.2.1: "Fall Arresters, Vertical Lifelines, and Rails"
- CSA-Z259.1: "Safety Belts and Lanyards"
- CSA-Z259.10-M90: "Full Body Harnesses"
- CSA-Z259.11-M92: "Shock Absorbers for Personal Fall Arrest Systems"
- CSA-Z259.12: "Connecting Components for Personal Fall Arrest Systems (PFAS)"
- CSA-Z195-02: "ProtectiveFootwear"
- CSA-Z195.1-02 "Guideline on Selection, Care, and Use of Protective Footwear"
- CSA-Z94.2-02: "Hearing Protection Devices - Performance, Selection, Care, & Use"
- CSA-Z94.3.1: "Protective Eyewear: A User's Guide"
- CSA-Z94.1: "Industrial Protective Headwear"
- CSA-Z94.4: "Selection, Use, and Care of Respirators"
- OSHA 3120 2002 (Revised): "Control of Hazardous Energy Lockout/Tagout"
- NFPA 10: "Standard for Portable Fire Extinguishers"
- NIOSH Pocket Guide to Chemical Hazards.
- WHMIS Pocket Dictionary
- Environment Canada/EPA 40 Hour Contaminated Site Health & Safety Training Course – Reference Manual
- American Conference of Governmental Industrial Hygienists – Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
- Encanex POSH
- Encanex General Emergency Response Plan for the Province of Newfoundland.
- EnCana Job Procedure – "Vessel Tank Cleaning"

APPENDIX H

LETTER FROM DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Environment and Conservation

October 03, 2012

File Ref No. 200.20.2100

ENCANEX Environmental Oil and Gas Corp.
Mr. Derek Bent
130 Southside Road
St. John's, NL
A1C 5V3

Project: **ENCANEX Wastewater Treatment Plant**
Location: **Pier 17 - St. John's Port Authority**

Please be advised that The Environmental Assessment Regulations, 2003, Section 45.2 and 47.1(b define your project as an undertaking requiring environmental review pursuant to the Environmental Protection Act, SNL 2002, cE-14.2.

You are therefore required to register your undertaking with this Department. The attached booklet entitled Environmental Assessment: A Guide to the Process provides the registration format and other information to assist you. It is recommended that a draft of the registration document be submitted for review. Also enclosed for your guidance is a draft permit listing to be consulted when completing your registration document.

Please be aware that under provisions of the Act, undertakings may not proceed and other government agencies may not issue any relevant authorizations until a decision is rendered by the Minister. A decision by the Minister will be provided to you within 45 days following receipt of your registration.

If you have any questions, please contact Mr. Eric Watton at (709) 729-2822, toll free at 1-800-563-6181 or email at ericwatton@gov.nl.ca. Our staff is always ready to assist you.

Sincerely,

Bas Cleary
Director
Environmental Assessment Division

encanex

APPENDIX I

WASTEWATER TREATMENT GUIDELINES

Definitions

1. In this Certificate of Approval:

- **adverse effect** means an effect that impairs or damages the environment and includes an adverse effect to the health of humans;
- **associated product** means petroleum or a derivate of it, except gasoline, which is in a liquid state at ambient temperature and pressure;
- **CCME** means Canadian Council of Ministers of the Environment;
- **CEQG** means CCME Canadian Environmental Quality Guidelines;
- **contaminant** means, unless otherwise defined in the regulations, a substance that causes or may cause an adverse effect;
- **Department** means Department of Environment and Conservation;
- **Director** means the Director of the Pollution Prevention Division of the Department;
- **discharge location** means either a sanitary sewer, storm sewer, waterbody (including marine water bodies), groundwater re-injection, holding tank/pond, or settling pond;
- **oily water** means water contaminated with only TPH in excess of 15 ppm (or 100 ppm if discharging to sanitary sewer systems with a WWTP. It should be noted that WWTP's do not treat flows from storm sewers). Furthermore, oily water may contain TSS below or above acceptable levels, but not likely contain other contaminants of concern;
- **QA/QC** means Quality Assurance/Quality Control;
- **Regional Director** means the Director of the nearest SNL regional office;
- **SNL** means Service Newfoundland and Labrador;
- **TPH** means total petroleum hydrocarbons as measured by the Atlantic PIRI method;
- **TSS** means total suspended solids;
- **used lubricating oil** means lubricating oil that as a result of its use, storage or handling, is altered so that it is no longer suitable for its intended purpose, but is suitable for refining or other permitted uses;
- **used oil** means a used lubricating oil or waste oil;
- **waste oil** means an oil that as a result of contamination by any means or by its use, is altered so that it is no longer suitable for its intended purpose. (It should be noted that oil collected by the company wastewater treatment system will most likely be considered as waste oil and, therefore, considered used oil);
- **WWTP** means wastewater treatment plant. Generally, a municipal WWTP treats sanitary sewer flows, but not stormwater flows.

Legislation

2. The activities associated with this operation may involve, but not be limited to, the following provincial Acts and Regulations and their successors:

- *Dangerous Goods Transportation Act*
- *Fire Prevention Act, 1999*
- *Environmental Protection Act*
- *Air Pollution Control Regulations, 2004*
- *Storage and Handling of Gasoline and Associated Products Regulations, 2003*
- *Used Oil Control Regulations*
- *Water Resources Act*
- *Environmental Control Water and Sewage Regulations, 2003*.

3. The activities associated with this operation may involve, but not be limited to, the following federal Acts and Regulations and their successors:

- *Canadian Environmental Protection Act, 1999 and Regulations*
- *Interprovincial Movement of Hazardous Waste and Hazardous Recyclable Material Regulations*
- *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations*
- *Transportation of Dangerous Goods Act and Regulations*
- *Fisheries Act*
- *National Fire Code*

Financial Assurance

4. Valid environmental liability impairment insurance in the minimum amount of $1,000,000 shall be maintained otherwise this approval is null and void.

5. A surety bond of $10,000 shall be on file with the Department, otherwise this approval is null and void.

6. Annual updates of the financial assurance documents shall be filed with the Department.

7. The company shall provide the Department with three months advance notice if they intend to cancel and/or change the insurer or bonding agent.

Spill Prevention

8. Areas in which substances are used or stored which causes or may cause an adverse effect shall have impermeable floors and dykes or curbs and shall not have a floor drain system, nor shall it discharge to the environment. Areas inside the dykes or curbs shall have an effective secondary containment capacity of at least ***110%*** of the chemical storage tank capacity, in the case of a single storage container. If there is more than one storage container, the dyked area shall be able to retain no less than ***110% of the capacity of the largest container or 100 %*** **of**

the capacity of the largest container plus 10% of the aggregate capacity of all additional containers, whichever is greater. These dyked areas shall be kept clear of material that may compromise the capacity of the dyke system. Once a year, the dykes shall be visually inspected for their liquid containing integrity, and repairs shall be made when required. Once every ten years, the dykes shall be inspected, by a means other than visual inspection, for their liquid containing integrity, and repairs shall be made when required.

Oily Water & Used Oil Holding Tanks

9. Gasoline and associated products, oily water and used oil holding tanks shall be registered with SNL as per the ***Used Oil Control Regulations*** or ***Storage and Handling of Gasoline and Associated Products Regulations.*** The applicable registration forms are available at any SNL office.

10. Any spill or leakage associated to the rental of large capacity holding tanks and/or mobile rental tanks by the company and the required response actions thereof will be the sole responsibility of that company, unless otherwise defined in the rental agreement.

Pre-treatment Monitoring

1. Prior to treating wastewater, the company shall obtain and review the analytical results of the wastewater. This analysis will ensure that the treatment system can treat the wastewater to specified discharge criteria. The analysis will include the parameters listed in Table 1 and shall comply with the ***Laboratory Analysis & QA/QC*** section. These results shall be submitted to the Department as per the ***Reporting*** section.

Table 1: Water Chemistry Monitoring Program

Frequency	Parameters
Pre-treatment Prior to Discharge Monthly	**General Parameters:** temperature, dissolved oxygen (DO), nitrate + nitrite, nitrate, nitrite, pH, TSS, colour, sodium, potassium, calcium, sulphide, magnesium, ammonia, alkalinity, sulphate, chloride, turbidity, reactive silica, orthophosphate, phosphorous, DOC, conductance, TDS (calculated), phenolics, carbonate ($CaCO_3$), hardness ($CaCO_3$), bicarbonate ($CaCO_3$), TPH **Metals Scan:** aluminium, antimony, arsenic, barium, beryllium, bismuth, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, mercury, nickel, selenium, silver, strontium, thallium, tin, titanium, uranium, vanadium, zinc.
Weekly	pH, TSS, TPH and TDS

Waste water Monitoring

2. Prior to commencement of discharge, treated wastewater shall be held in approved storage tank, sampled and analyzed as per the Laboratory Analysis & QA/QC section for the parameters listed in Table 1. If the results are below the specified discharge criteria, discharge of the treated wastewater can commence. These results shall be submitted to the Department as per the Reporting section.

3. Once per week a grab sample of treated wastewater shall be collected and analysed for pH, TSS, TPH and TDS as per the Laboratory Analysis & QA/QC section. These results shall be submitted to the Department as per the Reporting section.

4. Once per month, a grab sample of treated wastewater shall be collected and analysed for the parameters outlined in Table 1. These results shall be submitted to the Department as per the Reporting section.

5. During discharge, the quality of the treated wastewater will be monitored using online pH, TSS and TPH analysers. If during discharge there is indication that the quality of treated wastewater does not meet the specified discharge criteria, then the discharge will stop immediately.

6. Records of online continuous monitoring shall be maintained for three years and made available to the Department upon request.

7. Online meters must be calibrated and maintained. The instruments are required to be calibrated prior to start up at each location and at a minimum of once weekly thereafter. Calibration and maintenance is to be performed in accordance with the manufacturer's specifications. In the event that the frequency in the manufacturer's specifications is different than as outlined in this Approval, the most frequent timeframe is to be followed. Calibration and maintenance records are to be kept for 3 years and made available upon request to the Department.

Specified Discharge Criteria

8. Treated wastewater may be directed to the environment provided the concentration of parameters in Schedule A of the ***Environmental Control Water and Sewage Regulations NLR 65/03*** are met.

9. Treated wastewater may be directed to a sewer with a wastewater treatment plant, provided the concentration of parameters in Schedule B of the ***Environmental Control Water and Sewage Regulations NLR 65/03*** are met and the owner of the sewer and wastewater treatment plant has agreed to accept the discharge.

10. Treated wastewater may be directed to a sewer system without a wastewater treatment plant, provided the concentration of parameters in Schedule A of the

Environmental Control Water and Sewage Regulations NLR 65/03 are met.

11. The company will install mitigation measures as necessary to ensure that discharge of treated wastewater does not cause erosion, siltation or any other adverse impacts on the environment receiving the treated wastewater.

Used Oil

12. Within the province, used oil may be delivered to an approved used oil storage facility.

13. Approved used oil combustion facilities in the province may have restrictions as to the classes of used oil which may be combusted. Used oils are classified in accordance with the procedure discussed in Appendix C.

14. Hazardous, contaminated or any class of used oil shall be delivered to a facility in the province which is approved to store, transport, re-refine, re-use, treat, and/or dispose of hazardous, contaminated or the applicable class of used oil.

15. Where possible, the operator of a used oil collection vehicle shall visually inspect each container of used oil for visible contamination before the contents are transferred to the collection tank/truck to avoid contaminating the used oil that has been collected.

16. Used oil collectors and transporters are prohibited from blending used oils with virgin oil in an effort to meet the specification levels for used oil combustion.

17. Used oils assigned different classifications as described in Appendix C shall not be knowingly mixed (blended) with other used oil or hydrocarbon except as permitted in the Used Oil Control Regulations NLR 82/02.

18. After bulking, all used oil shall be analysed by an accredited laboratory to determine the levels of contaminants of concern as identified in the Table of Contaminant Limits in Appendix C.

19. All used oils intended for transfer to an approved used oil combustion facility within the province shall be analysed by an accredited laboratory to ensure the used oil contaminant concentrations are within the limits, as defined by the classification procedure of Appendix C, and as outlined in the approval issued to the used oil combustion facility. A copy of the used oil combustion facility approval shall be obtained prior to transfer of used oil.

20. Records of the volume of used oil transferred for combustion or treatment and for shipment out of province, the date of the transaction, and the person/company that received the used oil shall be maintained and the records held for a period of not less than three years from the date of the transaction, and made available for

review by officials of SNL.

21. An annual summary of the records of used oil collected and transferred shall be provided to the SNL in electronic or hard copy form by January 31 of the following year.