

ENVIRONMENTAL ASSESSMENT REGISTRATION

Name of Undertaking:

DECONTAMINATION OF NORM CONTAMINATED TUBULARS

and

TEMPORARY STORAGE OF NORM WASTE

Proponent:

(i) Name of Corporate Body

Atlantic Inspection Services Inc.

(ii) Address

138 Clyde Avenue, Mount Pearl, NL A1N 4S3

(iii) Chief Executive Officer

Name: Tom Collingwood

Official Title: President

Address: 138 Clyde Avenue, Mount Pearl, NL A1N 4S3

Telephone No.:

(iv) Principal Contact Person for purposes of Environmental Assessment:

Name: Garry Bradley

Official Title: Manager of Operations & Quality

Address: 138 Clyde Avenue, Mount Pearl, NL A1N 4S3

Telephone No.: (709) 576-2684

The Undertaking:

(i) Nature of the Undertaking:

Atlantic Inspection Services (AIS) is requesting approval to operate a facility for cleaning and temporary storage of tubulars¹ containing Naturally Occurring Radioactive Material (NORM). NORM is deposited on the inside of tubulars used by the offshore oil industry and remains attached to the tubulars during production. Once removed from the production site the tubulars are cleaned and the NORM is collected, stored and disposed of at an approved waste disposal site.

(ii) Purpose/Rationale/Need for the Undertaking:

The offshore oil industry is maturing and as a result the production of NORM waste will increase. NORM is a by product of the long term extraction of oil from mature oil wells and is generally seen as a scale deposit on the inside surface² of the tubulars. Currently, these tubulars are transported out of the province for processing as there are no facilities in Newfoundland to remove waste from tubulars prior to tubular disposal.

Atlantic Inspection Services has identified an opportunity to expand its suite of services to include decommissioned tubular processing including cleaning, NORM waste collection and temporary storage. This new service will complement the existing services to our existing customers in order to continually provide cost saving initiatives and environmental improvements.

Description of the Undertaking:

(i) Geographical Location:

Atlantic Inspection Services is located at 138 Clyde Avenue, Donovans Industrial Park, Mount Pearl, NL (See Location Map – Figure 1).

(ii) Physical Features:

AIS facilities at Donovans, zoned as Industrial-Light with the city of Mount Pearl, includes a 668.9 m² (7,200 sq ft) inspection building/facility, 2.02 ha (5 acre) controlled access storage site, fenced/gated c/w video surveillance, and 185.8 m² (2,000 sq ft) administration space.

Atlantic Inspection Services has sufficient space within its existing storage yard to accommodate the tubulars requiring cleaning and disposal. A dedicated storage and containment system (10,000 litre in-ground storage tank) is located on the property (See Appendix – Location of Storage Tank and Lot Details) and complies with federal and provincial guidelines and regulations, as well as, the requirements of API, TH HILL, DS-1, DNV, CSA, ASME and other client specifications.

¹ Tubulars are any drill piping and casing used to drill and extract oil from sub-surface oil deposited either below the ground or below the sea.

² The exterior surface of the tubing is not expected to generate radiation doses to humans that exceed the unconditional derived release limits as identified in the Canadian Guidelines for the Management of Naturally Occurring Radioactive Materials.



Figure 1: AIS Plant Location

Atlantic Inspection Services will adhere to the Canadian Guidelines for the Management of Naturally Occurring Radioactive Materials. The Canadian Guidelines set out principles and procedures for the detection, classification, handling and material management of NORM in Canada and provide the framework for the development of NORM management practices and guidelines.

(ii) Physical Features:

The proposed NORM processing building will be approximately 650 m² (20 m x 35m) and will be positioned on the Northwest side of the property (See Figure 1 for location). The self-contained containment building will be of standard steel construction (insulated) with steel siding and will include the following features:

- 0.25 m (1 ft) high bermed walls - no floor drains
- Corrugated steel floor
- Complete compliment of emergency response equipment
- a 37 m² (400sq ft) post-decontamination segregated storage area
- Personnel decontamination facility complete with a shower and washroom, a utility room to process and store contaminated clothing and equipment..

(iii) Construction:

The facility will be constructed starting in Sept, 2013, and construction will take approximately 6 months to complete. During the construction phase, conventional construction methods will be employed for site preparation, concrete foundations & footings, steel erection and building cladding, etc. The use of heavy equipment will be required for site preparation, concrete footing, foundations and walls. The building steel will require the use of a crane during the erection phase and during the installation of the steel cladding. The building will be serviced with water and sewer for the City of Mount Pearl as required for the operation of washrooms and change rooms, etc. A 600 amp-3 phase electrical service will be provided via the existing electrical distribution lines available in the immediate vicinity. The facility/building will be inspected and commissioned before any contaminated tubulars are stored on site for processing.

(iv) Operation:

The following is a description of the typical operating sequence of activities (See Figure 2) from the initial pick up of the tubulars at the client's shore base, located at Marine Base located in the east-end of St. John's harbour, to the delivery of the tubulars at AIS facilities in Donovans. The facility in Donovans will operate on a 8 hr/day - 5 da/wk – 45wk/yr basis. The facility will be manned 8 hours/day and security will be maintained on a 24hr/day basis.

1 - Tubular Receipt & Radiation Assessment

AIS will provide a supervisor on site at shorebase during the offloading of the NORM contaminated tubulars and equipment to perform a radiation assessment upon arrival. AIS will use a Ludlum model survey meter equipped with a scintillation detector and pancake probe for the detection of radiation and surface contamination. AIS will be responsible for providing a temporary laydown area at clients Marine Base. All NORM assessment will be completed by AIS's RSO³ or RSO consultant during the offloading from the vessel and the loading onto trailer. The assessment of the tubulars will be conducted before trailers are fully loaded to ensure

³ RSO – Radiation Safety Officer

the dose limits are within the Canadian Nuclear Safety Commission (CNSC) guidelines for transport. AIS will also conduct an initial survey of the supply vessel and all flat deck trailers prior to the loading of tubular to ensure there is no contamination present. This will provide a baseline level to compare after the tubulars have been removed from the vessel and the trailers to confirm that there is no contamination present.

AIS Project Lead and Field Technician will be present at the offshore platform prior to the start of the loading process and will complete a review of the JSEA with those involved as well as complete a site Field Level Hazard Assessment (FLHA). As the tubulars are loaded onto the vessel offshore, Client/AIS will ensure that the end-cap protectors are secure on each joint by placing an alignment mark across the tightened protector. AIS will inspect each cap as each joint is loaded onto trailers to ensure that the cap has not become loose by ensuring the mark is still aligned.

AIS will also ensure there is sufficient spill response equipment present to deal with any minor spills and will conduct a survey and swab samples to confirm that all contamination has been removed/reduced to less than $0.5\mu\text{Sv/hr}^4$ at 50 cm and fixed surface contamination less than or equal to 1 Bq/sq.cm averaged over a 100 sq-cm area.

2 - Tubular Transport

Upon receipt of all the tubulars at Shorebase, AIS will supply flat deck trailers to load for transport to the decontamination and disposal facility in Donovans (See Figure 3 for transportation route). Each bundle will be weighed (by the marine base crane) to ensure that each trailer load does not exceed the transporters 30MT weight restriction. Similarly, AIS are to ensure the tubulars are no longer than 14 m (46 ft) to ensure they will fit on the trailers. The tubulars will remain bundled and will be placed directly onto the flat-bed trailers. AIS to supply experienced personnel to assess bundles of pipe as they arrive at clients Marine Base. If any bundles are discovered to be loose, AIS inspection personnel will loosen the shackles with ratchets, have the crane operator place tension on the load to take up any slack in the sling and retighten the shackle with a ratchet. Each load will be inspected to ensure all tubulars are secure for transport and the load will then be covered as per Transport Canada requirements.

As the NORM contamination is expected to have specific activity greater than 70 Bq/g^5 , the tubulars are required to be transported as a Transportation of Dangerous Goods (TDG) Class 7 material and all transport documentation is to include the following:

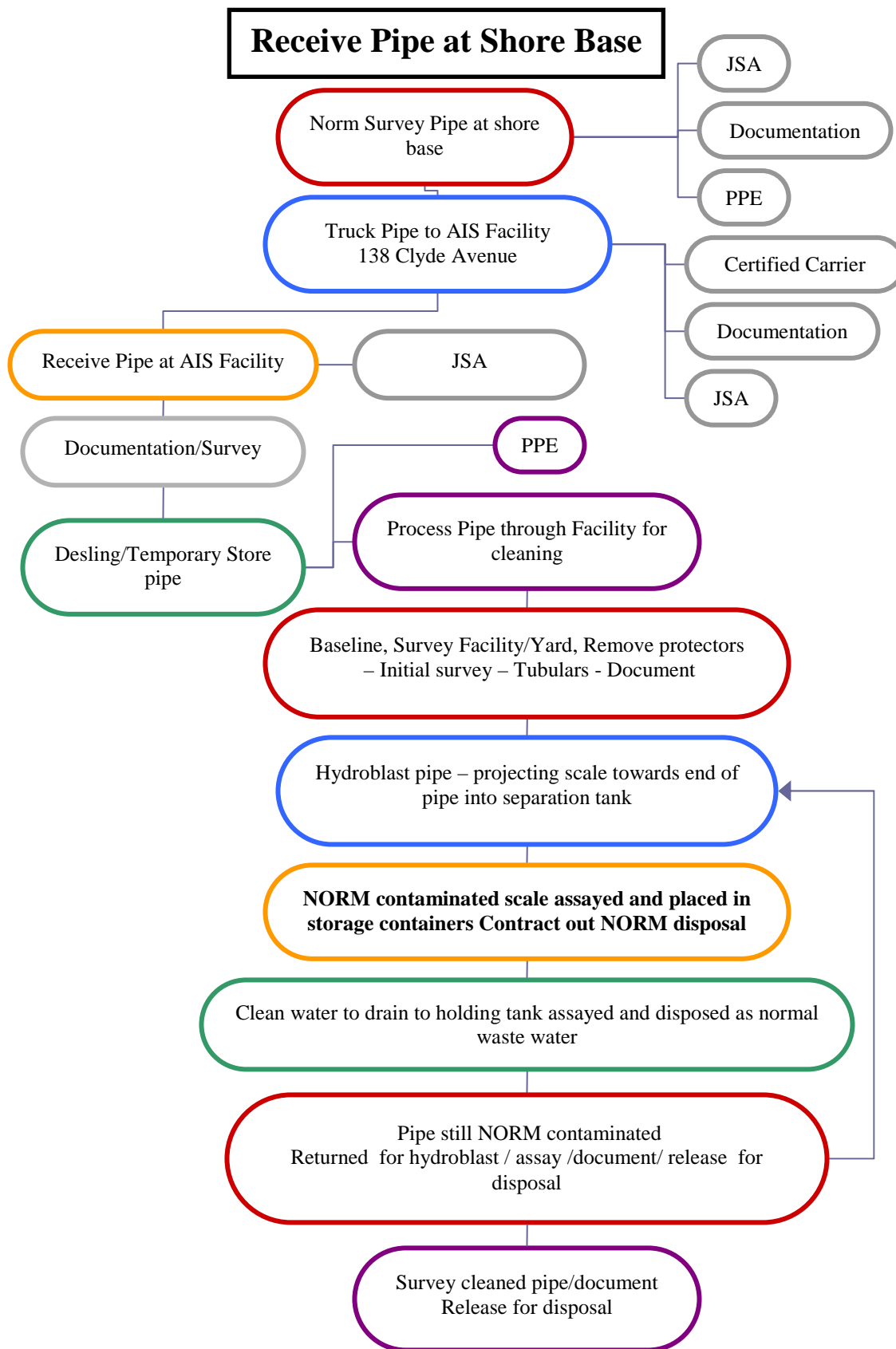
Proper shipping name "RADIOACTIVE MATERIAL, Surface Contaminated Objects (SCO-I) non fissile"

- United Nations Class number 7
- United Nations Number UN2913
- The name of each radionuclide present
- The maximum activity of the consignment
- The category of package - White I, Yellow II Yellow III
- The transport Index (Yellow II and III only)
- A detailed statement of contents such as Naturally Occurring Radioactive Materials - NORM contaminated oilfield tubing and parent radionuclide's present.
- The words "EXCLUSIVE USE SHIPMENT"

⁴ 0.5 Microsieverts/hr at 50 cm is the surface contamination unconditional derived release limits for discrete NORM sources Canadian NORM Guidelines page 26 section 5.3.3 The occupational dose rate that will give an incremental gamma radiation dose of 1mSv/a is 0.5 Microsievert/hr

⁵As per Transportation of Dangerous Goods Exemptions

Figure 2: Tubular Cleaning and Disposal Flowchart



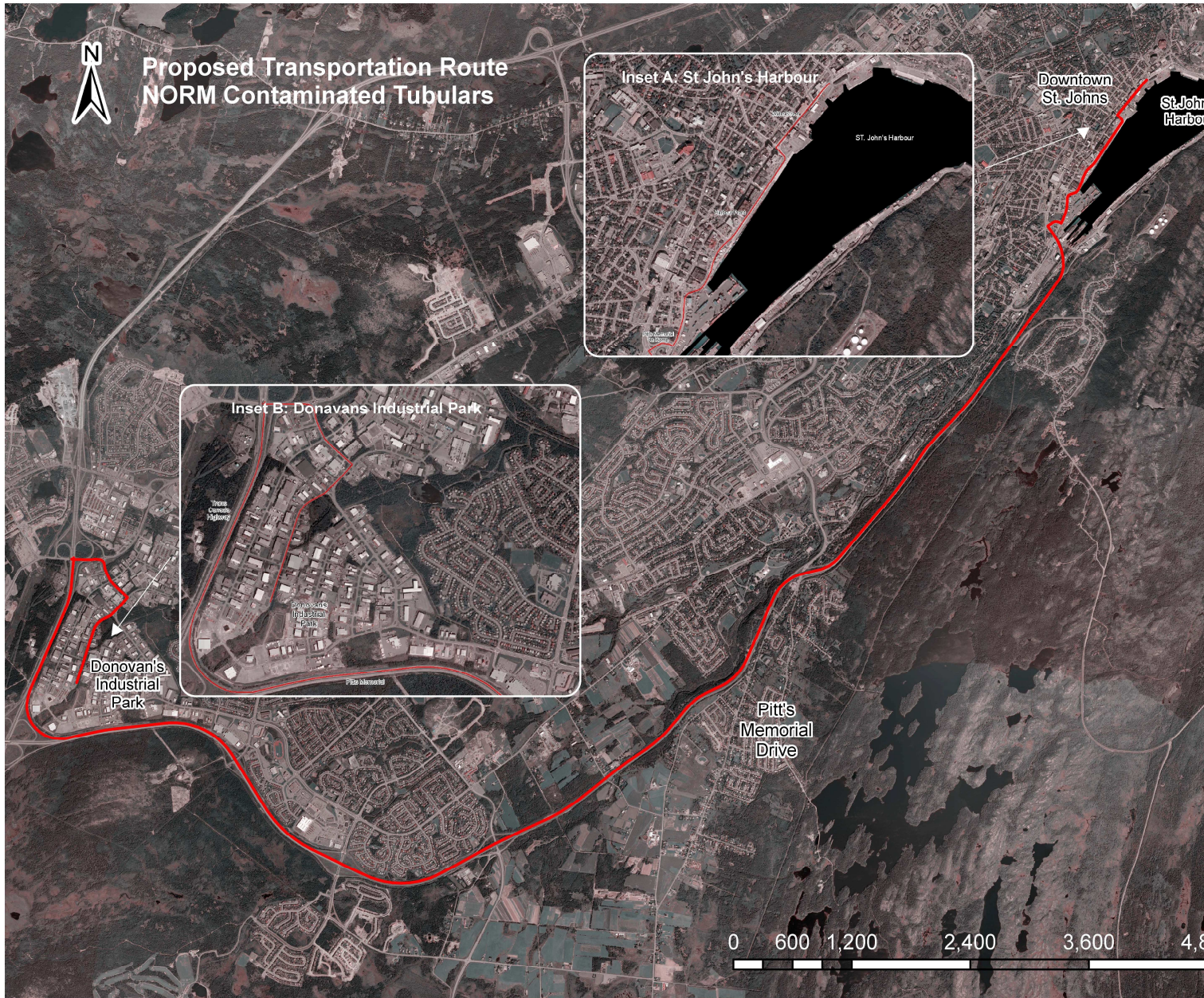


Figure 3: Transportation Route Marine Base to AIS Facility Donovans

AIS will complete all required documentation (i.e. manifest, Bill of Lading, etc) associated with each load and will also ensure that the trailers have the proper placarding as required under TDG. AIS will identify and classify wastes through NORM surveys and radiochemical analysis. The material / tubulars will be accompanied by appropriate documentation when received at our secure site in compliance with Canadian Transportation of Dangerous Goods regulations.

The tubulars are shipped in bundles of 11 and held together with 19 mm x 12 m (¾" x 40') wire rope and Crosby clips. Each bundle will be equipped with its own lifting bridles.

AIS will utilize a third party, licensed hazardous waste transporter to transport the tubulars to the decontamination facility in Donovans for decontamination and temporary storage. AIS/ Client will be responsible for loading the tubulars aboard flat deck trailers at clients Marine Base. Decontamination will be accomplished with the use of ultra high pressure blasting equipment which will ensure the removal of residue and/or scale from the interior surface of the tubing and minimize the amount of potentially NORM contaminated wash water generated during the cleaning process.

3 - Tubular Receipt at AIS Facility - Donovans

The NORM contaminated tubulars will be segregated and stored until decontaminated by high pressure water which will be contained separately in an on-site bulk storage container or steel containment drums. Quantities and level of radioactive materials temporarily stored will be such that annual affective dose limits will not exceed 1 mSv. As well, quantities and levels of radioactivity temporarily stored will be such that a dose limit of 1 mSv will not be exceeded beyond that property boundary of Atlantic Inspections facility. NORM waste will be shipped from the facility within one (1) year from the date of reception. The operation will be in effect for as long as the services are required by AIS clients. NORM waste will subsequently be sent for decontamination, disposal or longer-term storage to licensed facilities outside the province of Newfoundland and Labrador.

In addition to the above the following procedures will be implemented.

- Daily visual inspection and log system
- Regular (weekly/monthly) monitoring for gamma radiation activity levels
- Complete supply of required PPE .
- Comprehensive inventory management and tracking system
- Continuous upgrading and training of personnel
- Radiation survey meter with threshold action level alarm.
- Personal radiation dosimeters to measure worker radiation exposure.
- Radio chemical analysis of NORM contaminants.
- Radiation Contamination meter training.

4 – NORM Residue On-site Temporary Storage at AIS Facility Donovans

- Drums will be stored in a bermed, slabbed, fenced 20 x 20, impermeable surface containment area.
- Residue volume estimated to be one 45 gallon drum / 200 tubulars.⁶
- Drums will remain in containment area for a period of 6 -12 months until quantities warrant ground shipment.

⁶ The pressure washer generates 4 gal / min. it will take 2.5 min per pass x 4 pass per tubular, for 10 min per tubular.
10 Minute/tubular x 4 gal/min = 40 Gallons per tubular.

Historical data tells us that 200 tubulars per an event would be a good estimate.

200 tubulars x 40 gallons = 8000 gallons of waste water and best guess on the particle (sediment) would be 750 - 1000gm per tubular.

Estimated sediment weight for 200 tubulars would be 150- 200kg. (one 45 gallon drum)

5 – NORM Residue – Disposal

Contaminated Residue

NORM contaminated residue will be stored at the AIS site in Donovans until it is shipped to a licensed disposal facility. Normcan, located at Tervita, Standard Alberta is the preferred company for the final disposal of the contaminated waste from the Tubulars.

There are diffuse and discrete Unconditional Derived Release Limits for NORM sources. The recovered hydroblast water will be classified as Diffuse NORM and the Aqueous release limits are 10 X the Guidelines for Canadian Drinking Water Quality⁷.

Waste Water Disposal⁸

Pardy's Waste Management Limited will be utilized to dispose of the waste water from the tubular decontamination. A work order will be generated based on the job sheet that Pardy's Operators have to service the AIS site. The original job sheet contains the information from the customer on the pick up site, product volume and product type for disposal.

In the case of waste oil/waste oil slops, the product is transported to Pardy's waste oil facility where it is off loaded. The load is recorded on our drop off slips to ensure it matches the customer information on the work order.

The waste oil slops are then put through a centrifugal process to separate the water and solids from the waste oil. The process takes place in a dyked tank storage facility.

The entire process tracks the customer product from pick up to disposal.

(v) Potential sources of contamination during the operation of the NORM Temporary Storage Area:

Spills of waste materials. Since the containment system is designed to contain any spills within the confines of the container, land or groundwater contamination will not be an issue. Emergency response equipment and spill kit are located on site at the Facility. All staff members are fully trained in the proper use of this equipment during spill cleanup events. AIS anticipate receiving only NORM waste that is properly contained and documented in accordance with regulatory requirements. Given that NORM will not be treated on location the potential for pollution is considered to be very low.

Atlantic Inspection Services will develop a NORM Management Plan and a Contingency Plan to outline a predetermined set of instructions with the aim to provide a prompt and coordinated response to any foreseeable emergency associated with the operation of the Facility and the temporary storage of NORM. These plans cover the reporting, containment, removal and clean up of a spill or fire of any material stored on the property. The goal of these plans is to assist in developing a high level of preparedness for response to a spill or fire situation. As well, the objectives of Atlantic Inspection Services plans include ensuring the safety of employees, contractors and the public, developing an effective incident reporting system and minimizing any potential damage to the environment or the facility.

⁷ Note: It is assumed dilution of the release will be used and the NORM released must also meet provincial drinking water standards for NORM. This waste water if dilute enough will be treated like normal mud/oil currently handled by Pardys.

⁸ See letter from Pardy's in the appendix.

(vi) Other environmental protection measures will include:

Mandatory load inspections for each shipment of NORM waste will be completed and each container checked for integrity, to ensure all containers are securely sealed and comply with all shipping requirements. Only transport Canada Approved shipping containers are utilized. Procedures to ensure that all waste is described accurately on a waste manifest and identified on a waste profile sheet with documentation to accompany the waste shipment. NORM waste will typically be packaged in 205 L open top metal drums secured tightly with a sealed lid and ring. Radiation monitoring during processing and regular contamination surveys during storage. Radiation detectors at boundary points of processing and storage areas. This monitoring will be scheduled and recorded. Radiation detectors will be located at boundary points of processing and storage areas.

(vii) Occupations:

Occupations associated with the cleaning of tubulars and the temporary storage of NORM will may increase and can also be incorporated into the responsibilities of existing professional staff.

List of occupations involved in the existing and proposed operations;

- NORM Technician - 2
- Hi-pressure water cleaner operators - 2
- Pipe Yard Tech modify for norm handling - 2
- RSO Radiation Safety Officer/consultant – 1

Precautions/training of NORM workers:

- Radiation safety awareness training will be provided to all NORM workers upon orientation and every 2 years thereafter.
- All NORM workers will wear radiation badges (dosimeters)when handling NORM materials during the receipt, processing, storage, monitoring and release of any NORM for disposal.
- Training on proper care and use of the dosimeters will be provided and radiation exposure doses posted for workers and reviewed by RSO.
- All norm workers will wear NIOSH⁹ approved radionuclide dust respirators when hydroblasting.
- Hydroblasters will wear tyvec suits , non permeable footwear and gloves when hydroblasting to prevent personal contamination and to be easily decontaminated if necessary.
- All NORM workers will be trained on the use of contamination meters, and survey meters and decontamination procedures.
- A decontamination station shower and storage facilities will be provided.
- Survey meters must be calibrated once every 12 months or when maintenance is performed.
- Worker Emergency response worker training will be provided for security breaches,loss or theft of NORM, spills and any unusual occurrences.

⁹ National institute for Occupational Health & Safety

(viii) Funding:

The total estimated capital expenditure for this project is \$500,000. This undertaking will be financed through a combination of internal and Government agency funding.

Personnel

AOSC is committed to the local community, industry and its people. Through this commitment we are constantly researching new and improved techniques in the inspections and repair fields. By developing relationships with other companies we are able to transfer technology to our personnel and industry.

AOSC is committed to hiring local personnel who have been locally trained with experience in the oil and gas industry. We have a continuing education training program so our personnel are constantly enhancing their skill.

Our personnel are our biggest resource and we are committed to a proactive approach through our Health, Safety and Environment Program.

Equipment

Atlantic Oilfield Service Centre Inc. strives to provide the latest equipment and technology on the market to provide quality services which will meet or exceed the requirements of API, TH HILL DS-1, DNV, CSA, ASME, BS and client specification.



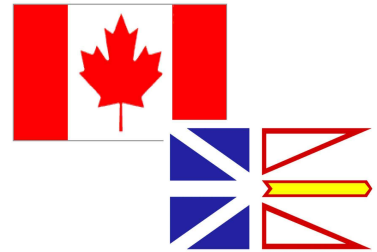
Our Clientele

- ◆ Baker Inteq
- ◆ Bowringer Engineering Ltd
- ◆ Brown Offshore (1997) Inc
- ◆ Chevron
- ◆ Cooper Cameron Canada Corp.
- ◆ FMC Technologies Canada Company
- ◆ Global Santa Fe International (Canada) Drilling Company
- ◆ Halliburton Energy Services
- ◆ Husky Energy
- ◆ Import Tool
- ◆ Nalcor
- ◆ Noble Drilling
- ◆ Petro Canada
- ◆ Schlumberger Oilfield Services
- ◆ Stabil Drill
- ◆ Statoil
- ◆ Suncor
- ◆ TAM Internation Canada
- ◆ Transocean Canada Co.
- ◆ Vectogray Canada Inc.
- ◆ Weatherford Canada Ltd
- ◆ Workstrings



138 Clyde Avenue
Donovans Ind. Park
PO Box 13278 Station A
St. John's NL, Canada A1B 4A5

Phone: (709) 576-3999
Fax: (709) 576-2684
Email: gbradley@aosc.ca
gpiccotti@aosc.ca



Facilities

AOSC is located at 138 Clyde Avenue, Donovans Ind. Park, St. John's NL. The Facility is fenced/gated and video surveillance in place to prevent unauthorized access. Facilities include a 7,200 sq ft inspection facility, a 10 acre storage site and a 2,000 sq ft administration space. This location also has a 10,000 Liter underground storage tank

Client Opportunities

- ◆ Provide an alternative to industry for OCTG Handling and Storage Services
- ◆ Provide multiple services required to maintain and repair drill stem at one location
- ◆ Provide cost savings to client through less trucking, storage and handling
- ◆ Field Inspection service with pickup and delivery to facility for small items i.e. subs
- ◆ Total Pipe Management / Inventory Control

Certifications / Memberships

- ◆ International Pipe Inspectors Association (IPIA)
- ◆ Operating to ISO 9001-2000
- ◆ Det Norske Veritas Approval
- ◆ Safety, Health, and Environment Program
- ◆ Comprehensive Training Program
- ◆ Approved applicator of Arcco product, Chromex AP and Titanium handbanding
- ◆ Guardian HB products



Services Offered

- ◆ Total Tubular Management / Inventory Control
- ◆ Short and Long Term Storage of OCTG and Equipment
- ◆ Warehousing
- ◆ OCTG Inspection and Storage
- ◆ Onsite Threading and Repair Facility
- ◆ Non Destruction Testing
- ◆ Field Inspection Service Unit
- ◆ Tubular Cleaning
- ◆ Sandblasting Service
- ◆ Hardbanding Repair Facility
- ◆ New and Used Drill Pipe Inspection
- ◆ Drill Collar and Hevi-Wate Drill Pipe Inspection
- ◆ Drilling Tool Inspection and Repair i.e. Mud Motors, MWD, LWD, Jars, Subs
- ◆ Tool Maintenance i.e. Painting and Identification
- ◆ Re-facing Service
- ◆ Pipe Straightening
- ◆ Hardness Testing
- ◆ Tubular preservation, ID/OD corrosion inhibitors



Atlantic Inspection Services Inc.

Atlantic Oilfield Service Center Inc. provides OCTG Services to the oil and gas, mining, fishing and construction industries of Atlantic Canada. AOSC (Atlantic Oilfield Services Center) provides a one stop shop service for the Storage, Handling, Inspection and Repair of OCTG.

AOSC is a 100% Newfoundland owned and operated with a management team that offers clients 50 years of combined experience.

AOSC is supported by [ATLANTIC INSPECTION SERVICES INC.](#), providing a full range of inspection services, [ATLANTIC HARDBANDING INC.](#), providing hard banding service and [BROWN OFFSHORE \(1997\) INC.](#) providing the repair and threading services.



Operational Procedures – Radiation:

Decontamination Process: See flow chart

ALARA

A major principle in radiation dose control is that if doses can be reduced by reasonable actions, those actions should be taken. The goal of Atlantic Inspection Services NORM Management Plan is that doses should be As Low As Reasonably Achievable (ALARA)

Types of Radiation

There are three basic types of radiation that may be emitted by NORM:

1. Alpha radiation is made up of heavy, charged particles that cannot penetrate very far, even in air. They can be stopped by a piece of paper.
2. Beta radiation consists of lighter charged particles than alpha particles that travel faster and are thus more penetrating than alpha radiation. Beta radiation can be stopped by a few centimetres of plywood.
3. Gamma radiation consists of high-energy rays, and is very penetrating. A meter of concrete or several meters of water can stop it.

Fundamental Radiation Protection Quantities

There are two fundamental quantities associated with radiation protection:

Becquerel (Activity).

The Becquerel (Bq) measures the quantity of radioactivity present without consideration for what kind of radiation is emitted. 1 Bq = 1 nuclear transformation (disintegration) per second.

Sievert: Effective Dose (Biological Effect).

Different types of radiation have different penetrating power and different parts of the body have different sensitivities to radiation. Dose assessment therefore requires knowledge of the type and amount of radiation and the biological sensitivity of the body parts exposed.

Radiation Dose Limits

Atlantic Inspection Services adopts the recommendation of the Federal Provincial Territorial Radiation Protection Committee that the annual incremental effective dose to persons exposed to NORM as the result of a work practice be limited to the values given below in Table 1.

Radiation Dose Limits

Affected Group	Annual Effective Dose Limit (mSv) ^(a)	Five Year Cumulative Dose Limit (mSv)
Occupationally Exposed Workers	20 ^(c)	100
Incidentally Exposed Workers and Members of the Public	1	5

Quantities and level of radioactive materials will be managed such that annual affective dose limit will not exceed 1 mSv; the limit for an incidentally exposed worker or member of the public.

General Safety Rules for Handling NORM

Protection of individuals from sources of NORM radiation will be accomplished by using time, distance, shielding and contamination control as well as following published guidelines, corporate policies and procedures. In addition to these measures, AIS will also implement the following General Rules when working with NORM contaminated material in the workplace:

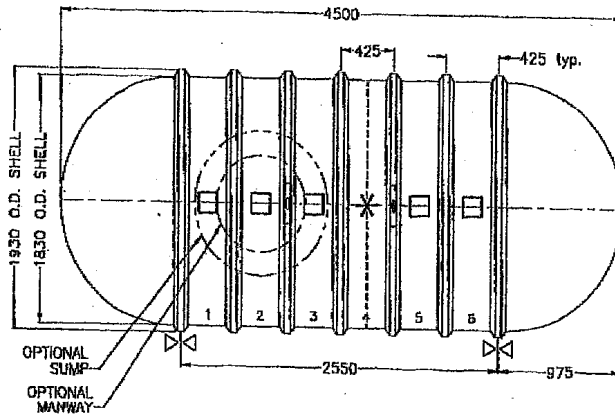
General Rules for Working with NORM Wastes

1. Work areas where NORM-contaminated materials are to be used will be clearly defined.
2. Only authorized workers are permitted to work in NORM storage areas.
3. Workers must wear appropriate personal protective equipment and clothing and observe safe work practices when working in NORM storage areas.
4. Avoid direct physical contact with NORM-contaminated surfaces; wear disposable gloves and coveralls.
5. Do not work with NORM materials if there are unprotected cuts or abrasions on the hands.
6. Use ventilated enclosures when involved in activities that have the potential to generate airborne NORM particulate. Wear a respirator equipped with cartridges approved by NIOSH for radionuclide dust when a ventilated enclosure is not available.
7. Do not drink, eat or smoke while working with or in a NORM contaminated area.
8. Always monitor hands, clothing and boots for NORM contamination before leaving a designated NORM control area.
9. Check the work area for removable NORM contamination upon completion of work with NORM contaminated materials or equipment. Clean area immediately if NORM contamination is found; and
10. Keep Norm contaminated materials segregated from non-contaminated items.

Underground Tank Specifications:

Z60SW - 10,000 L
 SINGLE WALL ULC TANK
 ACTUAL CAPACITY = 10,066 L
 APPROXIMATE WEIGHT = 380 kg

Approved.



Tanks shall be tested then installed with pea gravel or crushed stone as specified in the current installation instructions provided with the tank.



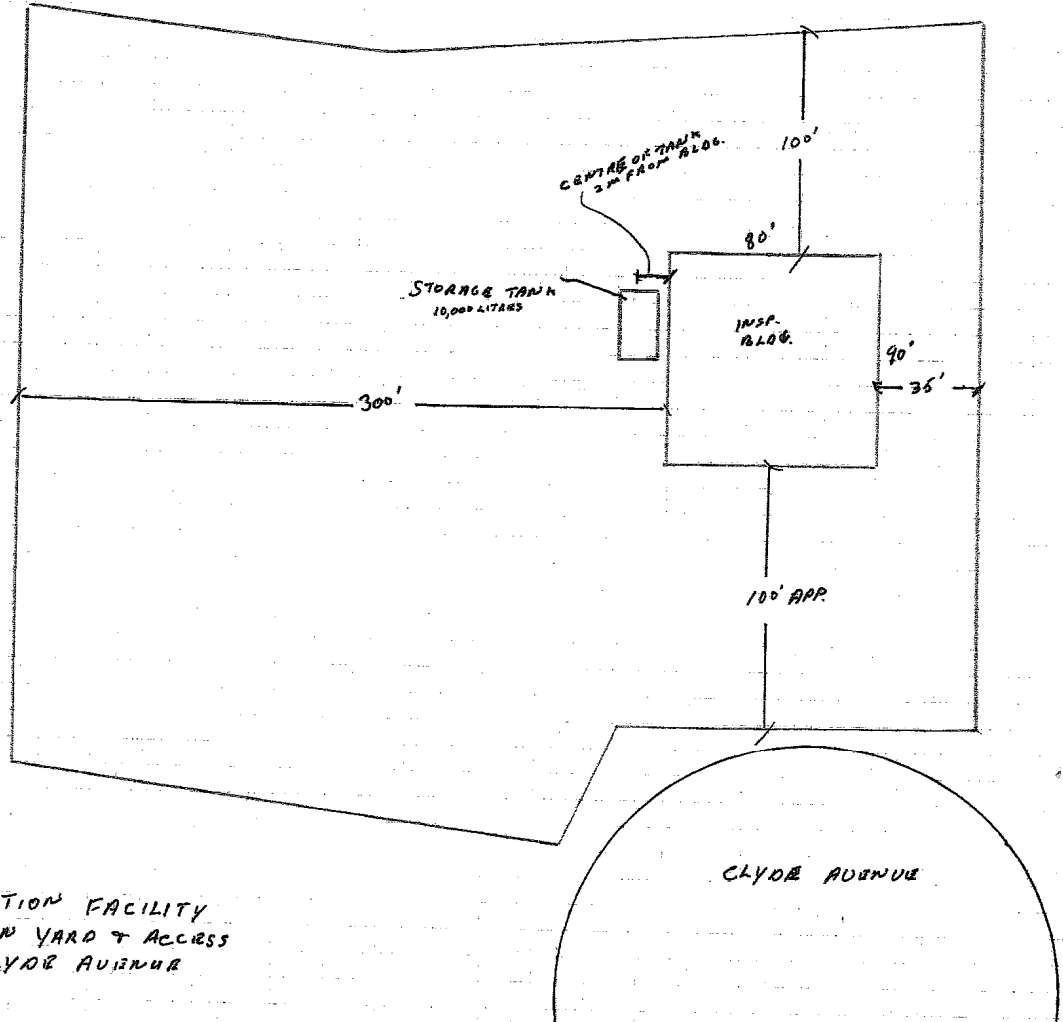
SYMBOL IDENTIFICATION: <input type="checkbox"/> APPROVED FITTING LOCATIONS <input type="checkbox"/> HOLD DOWN STRAP LOCATION <input type="checkbox"/> LIFTING LUG <input checked="" type="checkbox"/> FITTINGS CANNOT BE INSTALLED ON LOCATIONS MARKED THUS		✓ 22" DIA. FRP MANWAY — 24" DIA. FRP MANWAY — 30" DIA. FRP MANWAY ✓ STL BLANK MANWAY COVER ✓ STL MANWAY COVER WITH 4" NPT CPLGS ✓ 4" NPT STL HALF CPLGS ON TANK SHELL — PRECAST CONCRETE ANCHORS — FRP STRAPS & TURNBUCKLES ONLY — U-STYLE ANCHOR LOOPS (CONC. PAD)	— 42" DIA. FRP REVERSE FLANGE COLLAR — 42" DIA. FRP CONTAINMENT COLLAR ONLY — 48" DIA. FRP CONTAINMENT COLLAR ONLY — 42" DIA. FRP TURBINE ENCL. (38" HIGH) — 48" DIA. FRP TURBINE ENCL. (42" HIGH) — WITH 32" DIA. FRP SLIP-ON COVER — WITH 32" DIA. FRP FRICTION FIT COVER — WITH 32" DIA. FRP WATER-TIGHT COVER ✓ Please indicate all required optional equipment. Indicate on tank drawing, location of fittings & manway.	
CUSTOMER: _____ DESTINATION: _____ INTENDED USE: _____ PREPARED BY: _____		MANWAYS AND SUMPS LOCATED ALONG THE TOP CENTERLINE MUST NOT INTERFERE WITH HOLD DOWN STRAP LOCATIONS		
ZCL COMPOSITES INC. PHONE: 1-800-661-8265 FAX: 1-780-466-6126		SCALE: N.T.S. SHEET: 1 of 1 DRAWN: LJB DATE: FEB 02/99 DRAWING NO.: M/E/5170.0 APP'D: _____ DATE: _____	ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED DATE: _____ REVISION: _____	

03/17/2013 00:20 FAX

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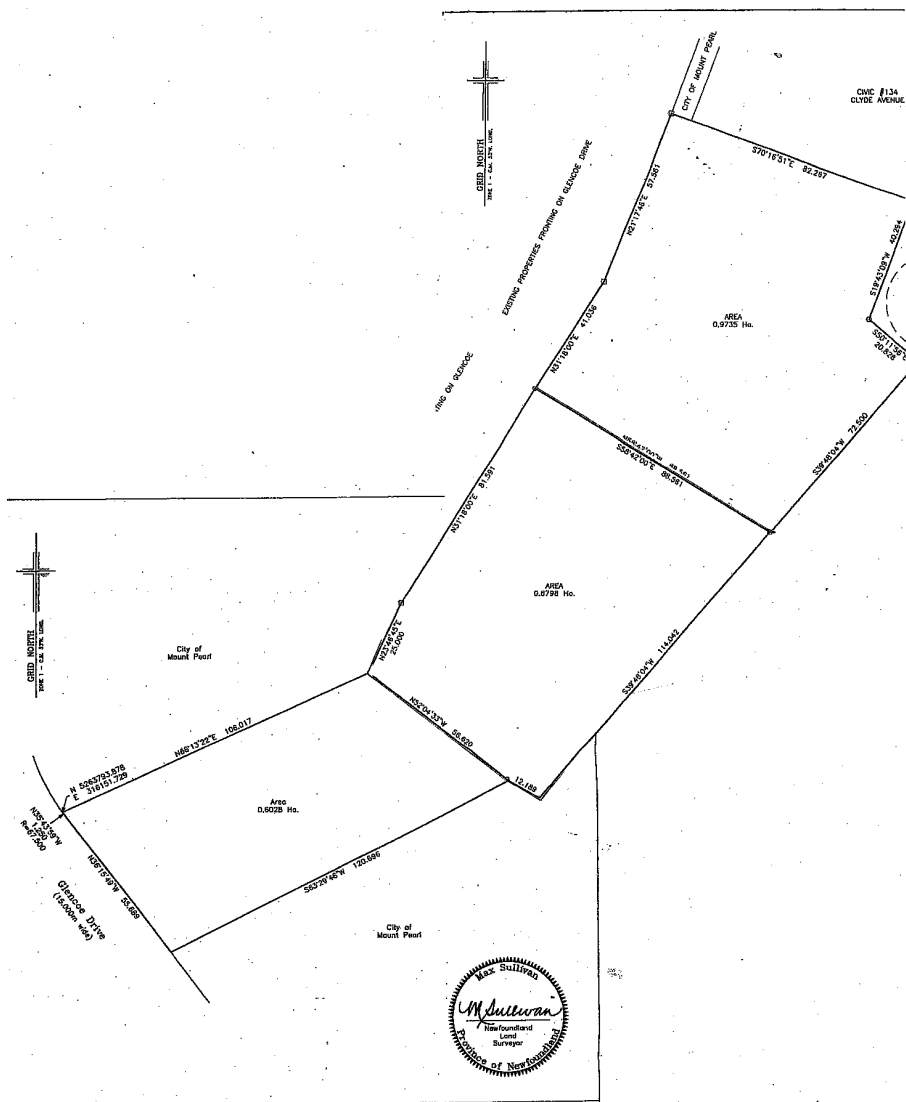
*FOR BROWN OFFSHORE
 09/09/02*

Location of Storage Tank and Lot Details:



INSPECTION FACILITY
LAYDOWN YARD & ACCESS
138 CLYDE AVENUE

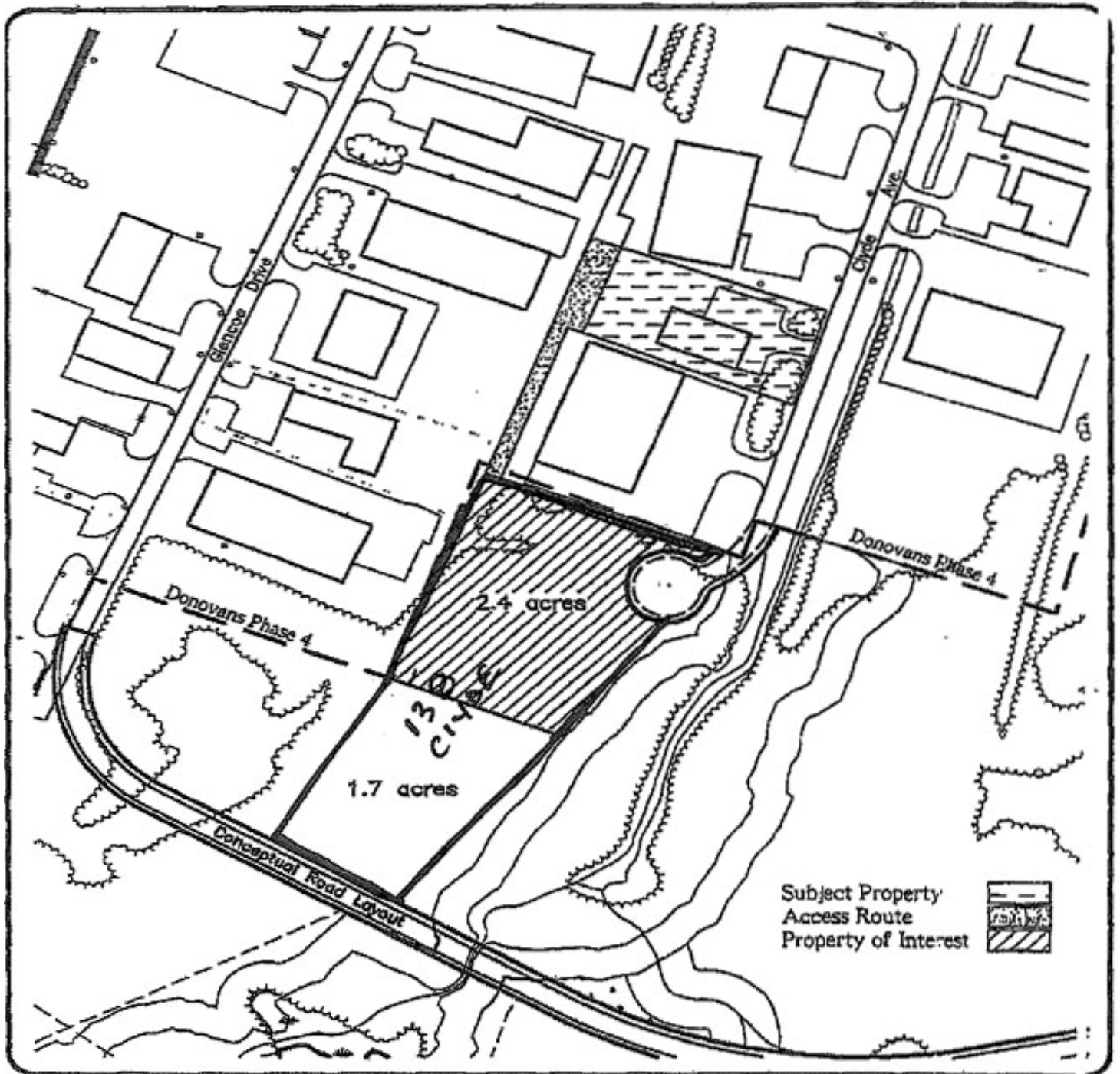
AIS Property Survey:



BOUNDARY SURVEY
 135 Glencoe Drive, Donovan's Industrial Park, Mount Pearl, NL
 prepared on behalf of the City of Mount Pearl for the purpose of
 conveying the property to Atlantic Oilfield Services Centre Inc.

SURVEYOR'S CERTIFICATION authorizing surveyor hereby certifies that this plan as prepared under his personal supervision and complies with the standards as defined, or by order for, by the "Land Surveyor's Act, 1981".	MAX SULLIVAN SURVEYS LTD. 17 Woodford Place Mount Pearl, NL A1N 2S1 Telephone: (709) 364-5155 Fax: (709) 737-0375 Cell: (709) 682-8897	REFERENCE MONUMENTS (HAD 89) 8022132 N 526301.083 E 317201.903 8022178 N 526301.657 E 317272.900 Combined Scale Factor = 0.999873 all distances are field and horizontal
		LEGEND O Placed Boundary Marker

SURVEYOR'S COPYRIGHT NOTICE
 Max Sullivan, Newfoundland Land Surveyor, 2005 authorized use, alteration or reproduction of this very document is prohibited by law as defined by the "Copyright Act". The authorizing surveyor hereby,



Donovans Properties Ltd.
Property, End of Clyde Avenue

Scale	1:2500	Date	29/10/1
Drawn by	HP	Prepared by	brown f
Location Plan			

AIS Facility Location – Donovan’s

AIS NORM Technician Job Description:

Role

The Norm Technician is responsible for assisting with decontamination and disposal of Naturally Occurring Radioactive Material (NORM) Waste Management and assisting in identifying and coordinating facility and system based design improvements. At our facility, you will be responsible for detecting, surveying, handling and decontaminating oilfield equipment and waste. Duties include cleaning with high pressure water blast equipment, sampling, documenting and storing waste. Other tasks include maintenance of the decontamination equipment and technical support to internal and external clients. To achieve all the key responsibilities, field work and overtime as well as weekend work will be required from time to time.

Responsibilities

- Ensure all Atlantic Inspection Services safety policies and procedures are followed.
- Detecting, surveying, handling and decontaminating oilfield equipment and waste
- Cleaning with high pressure water blast equipment
- Sampling, documenting and storing waste
- Maintenance of the decontamination equipment
- Technical support to internal and external clients

Interpersonal

- Strong verbal and written communication skills.
- Consistent approach to working with others, an ability to build and maintain strong relationships with internal and external customers.
- Self confidence and interpersonal flexibility
- The ability to prioritize work and a strict adherence to Safety and Safe Work practices

- Be available for call in work according to demand
- Liaise with co-workers and suppliers to complete assigned task.
- Ensure that equipment used is in good working order and, where required, calibrated.
- Ensure work is completed according to specifications and within the designated time frames.
- Ensure the accuracy and availability of all records produced by this role.
- Identify areas of improvement within your job role.
- Ensure good housekeeping practices are followed
- Take action to prevent the occurrence of nonconformities in all assigned work.
- Identify and advise management of inconsistencies between work practices and written documents.

Competencies

- A Grade 12 education or equivalent
- A valid Class 5 Driver's License
- Basic computer skills
- Preference will be given to those candidates with post secondary education or oil field experience and tickets in WHMIS, TDG Clear Language, Standard First Aid/CPR, H2S Alive, Confined Space Entry and NORM Safety Training.

RSO Radiation Safety Officer/Consultant:

1. GENERAL ACCOUNTABILITY

This position coordinates radiation safety to carry out training, licensing activities and address radiation safety concerns. The incumbent represents the organization in all licensing activities governed by the Canadian Nuclear Safety Commission.

2. STRUCTURE

While the incumbent has direct operational multi site responsibilities (HSC and SCM Nuclear Medicine) this position has additional responsibilities for providing multi and cross site coverage encompassing all modalities as required. The incumbent must be highly adaptive to a diverse, high pressure and a changing environment to coordinate these modalities.

3. NATURE AND SCOPE

This position is responsible to ensure quality control of equipment and meet Health Canada, Canadian Nuclear Safety Commission and Government Newfoundland Labrador regulations and recommendations.

The incumbent is central in providing radiation safety awareness and training, responding to queries within and outside the organization. Maintains and fosters working relationships with federal and provincial radiation safety officials. Responds to radiation safety issues by investigating and provides resolution which may include process improvement /structural and or equipment acquisition or modification.

The incumbent is responsible to coordinate all activities related to the installation of new equipment including department renovations with design engineers, facility management, and vendors, as well as federal and provincial radiation safety requirements.

Decisions are guided but not limited to quality risk issues, patient safety, radiation safety, collective agreements, Eastern Health Policies and federal and provincial legislation and regulations.

- Quality & Risk Management
 - Ensuring that all required quality control testing is performed on equipment in areas of responsibility.
 - Ensuring staff are trained/competent to perform roles and responsibilities.
 - Ensuring that all safety/quality issues in areas of responsibility are identified and resolved for the safety of clients and staff.
 - Participating in multidiscipline working groups/committees to develop, implement and measure outcomes.
 - Participating in the organization's CSRS program which includes reporting, responding, investigation and follow-up with the Quality & Risk Management consultant.
- Healthy Workplace
 - Develop and promote a safe and healthy work environment by participating in and supporting the Healthy Workplace initiative
 - Participate and take lead role in Occupation Health and Safety, Radiation Safety and provide comprehensive management function.

3.1. Internal/External Contacts & Committee Involvement

➤ External Contacts

- Canadian Nuclear Safety Commission
- Transport Canada -Transportation of Dangerous Goods Class 7
- The Society of Nuclear Medicine (International)
- Canadian Society of Nuclear Medicine
- Radiological Society of North America
- Health Canada Health & Safety Division
- Vendors
- Services providers for equipment repair & preventative maintenance
- Consultants – radio chemists / radio pharmacists and medical physicists

4. MANAGERIAL SKILLS AND OTHER KEY COMPETENCIES

4.1. EDUCATION

- Completion of a recognized program in Medical Radiation Technology
- Current registration with the Canadian Association of Medical Radiation Technologists
- An Advanced Certification, Bachelor of Technology, Degree in Business Administration or other relevant degree
- Formal healthcare management education such as The Canadian Healthcare Association's Health Services Management, Departmental Management, Modern Management or equivalent.
- Radiation Safety Officer Training and Certification

4.2. WORK EXPERIENCE

- A minimum of (5) five years experience in a Health related field.

4.3. LEADERSHIP AND MANAGEMENT SKILLS/ABILITIES/COMPETENCIES

- Proven management and leadership skills
- Excellent communications, interpersonal and teambuilding skills
- The ability to function in a high pressure, diverse and changing environment
- Strong oral and communication skills
- Experience in human resource and financial management
- Working knowledge of existing and emerging modalities /technology (e.g. PACS, MRI, CT, SPECT/CT, PET/CT, PET/MR etc.)
- Knowledge of management tools such as COGNOS, Strata Cap and Strata Track for indicators, HR performance and equipment acquisition and tracking.

5. WORKING CONDITIONS

- Radiation Safety training to Rural and City sites approximately 5-10% of the time
- Demanding timelines and high pressure decision making occurs regularly.
- Researching "best practices" in Nuclear Medicine/ Radiation Safety is regularly required.
- Extensive sitting & typing due to the nature of the position.
- High degree of concentration is required regularly.
- Conflicting priorities adds to stressful work environment
- Regularly manages responsibilities of other DI managers in their absence.
- Regularly relies on various programs such as IMT & Infrastructure support, etc. to complete required tasks before being able to complete own tasks.