



**ENVIRONMENTAL ASSESSMENT
REGISTRATION DOCUMENT**

PROPOSED SERVICES CENTRE
CHAPEL ARM, NL

Submitted by:

Pennecon Energy Services Group
20 Sudbury Street
St. John's, NL
A1E 2V1

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1.0 NAME OF UNDERTAKING PESG Chapel Arm Services Facility

2.0 PROPONENT

2.1 Name of Corporate Body Pennecon Energy Services Group

2.2 Address 16 Main Road Chapel Arm
Chapel Arm, NL
A0B 1L0

2.3 Chief Executive Officer Mark Duff
General Manager, Finance and Administration
PO Box 1083
20 Sudbury Street,
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2.4 Principal Contact Person Deidre Puddister
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3.0 THE UNDERTAKING

3.1 Nature of the Undertaking

Pennecon Energy Services Group (PESG) will be leasing the building located in Chapel Arm, NL. The scope of work will potentially include Fiber Reinforced Plastic (FRP), rubber lining, and fabrication/repair services for welding (carbon steel, titanium, aluminum, etc.). The proposed site is 0.338 hectares in size with a developed building existing on site.

3.2 Purpose/Rationale/Need for the Undertaking

The development is required to provide support services to contracted work in Long Harbour and the surrounding area. Work scopes currently include FRP, rubber lining, and fabrication.

Secured work scopes include support to Pennecon Energy Maintenance Services (PEMS) for smaller offsite FRP projects, rubber lining, etc. that will be utilized for large scale work at the Long Harbour site. PEMS will be utilizing this proposed location as a satellite work shop for small work

scopes relating to secured service contract work in the area. It is important to note that this service is not currently available to PESG at the Long Harbour site or in the immediate area.

4.0 DESCRIPTION OF THE UNDERTAKING

4.1 Geographic Location

The proposed project is located within the municipal boundaries of the Town of Chapel Arm beginning on the southern side of the Main Road (Cabot Highway), in the electoral district of Bellevue (see Figure 1).

As per Figure 2, the proposed area is bounded by Crown Land on the north east and south east perimeters. Bounded on the south west side by a heavy equipment contractor and across the main road is a machine / fabrication shop.

4.2 Physical Features

4.2.1 Project Site Description

The primary physical feature of this site, located at 16 Main Road (Cabot Highway), Chapel Arm is the existing building which was built in 2008. The proposed site is located 0.5 km from TCH, which provides easy access for delivery vehicles to the building as well as shipping within the area. The building is 110ft x 50 ft, 5500sq/ft; 4800sq/ft of which will be utilized for processing (FRP, rubber lining, fabrication, etc.), 1100 sq/ft of Mezzanine area for storage of FRP materials and consumables, 700 sq/ft office space, including lunch room and washroom (see Figure 3). Access to the site will be via the existing TCH, Long Harbour Access Road, Main Road Chapel Arm (Cabot Highway). In addition to the physical building the remainder of the building lot will be used as a laydown storage area.



Figure 1. Approximate location of proposed facility in Chapel Arm, NL

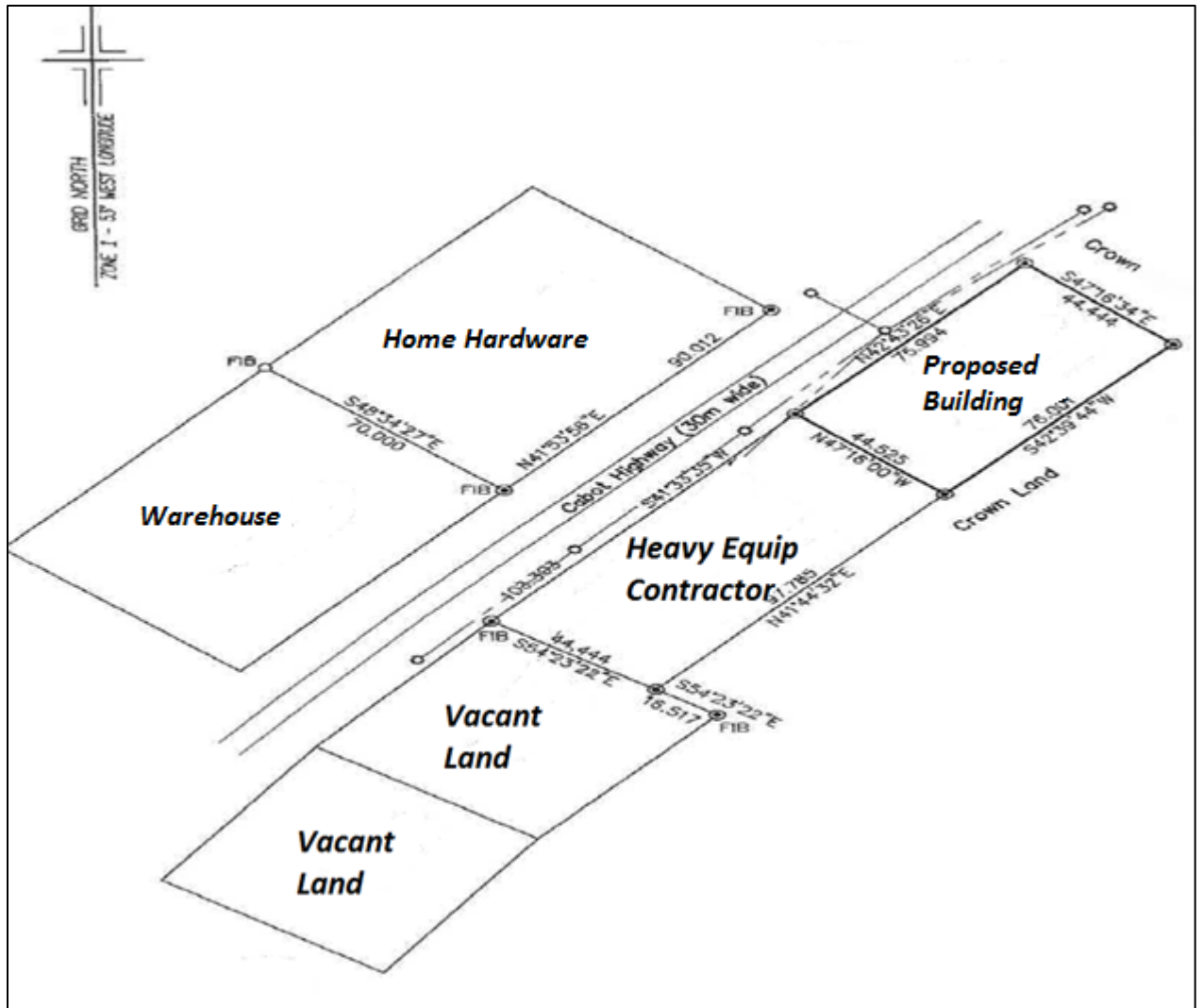


Figure 2. Proposed facility location and surrounding properties

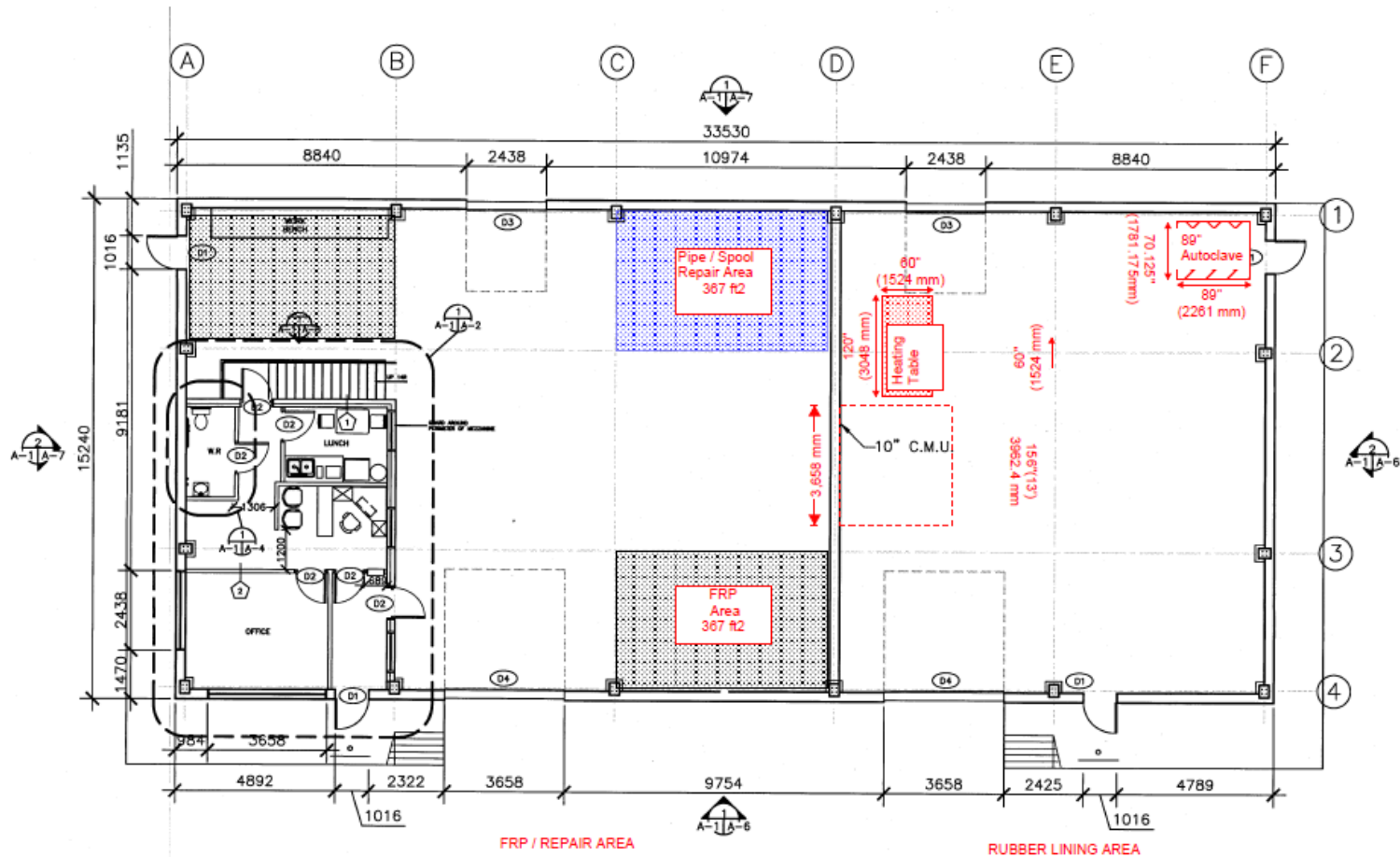


Figure 3. Proposed floor plan

4.3 Construction and Operation

The site and building has been in existence and operation for the past 9 years. PESG will be leasing the space for a period of up to 5 years. The building is located in a commercial/industrial area of the Town and building modifications have been submitted to Service NL for approval.

4.3.1 Site Access

Access to the site will be via an existing TCH and/or Long Harbor Access Road onto Cabot Highway (Main Road Chapel Arm). The building is located 0.5 kms off the TCH.

4.3.2 Site Construction

The site and building is in existence and building renovations are projected to take 3 months. Renovations will reflect changes as outlined in Figure 3.

4.3.3 Pipe / Spool Repair Area

The proposed building design, as per Figure 3, will include a designated pipe / spool repair area. This area will be constructed with 2 x 6 walls floor to ceiling (ceiling height ~26 feet) with both sides covered in 5/8" gyprock. A fire rated caulking will be used to seal from the top of the gyprock to the ceiling insulation. The inside of the repair area will have metal sheeting on the bottom 12 feet to protect against spark overspray. There will be 7 foot overhead door installed in the repair area leading to the main warehouse. A man door will be installed in the pipe / spool area and lead into a vestibule that will have a second man door leading into the main warehouse. The purpose of this is to segregate the two areas and reduce the likelihood of FRP emission transfer into the pipe / spool repair area.

4.3.4 FRP Area

The proposed building design, as per Figure 3, will include a designated FRP area. This area will be constructed with 2 x 6 walls floor to ceiling (ceiling height ~26 feet) with both sides covered in 5/8" gyprock. A fire rated caulking will be used to seal from the top of the gyprock to the ceiling insulation. There will be a man door will be installed in the FRP area and lead into a vestibule that will have a second man door leading into the main warehouse. The purpose of this is to segregate the two areas and reduce the likelihood of FRP emission transfer into the main warehouse.

4.3.5 Rubber Lining Area

A concrete floor will be poured in the proposed rubber lining area; the existing floor is a gravel floor. An overhead door will be installed between the two warehouse bays, as per figure 3, to provide access for material transfer. Equipment required for rubber lining to include 2 autoclaves and a heating table, as per Figure 3.

4.4 Potential Sources of Pollution during Operation

During operation sources of pollution have been identified as the following:

1. Styrene emissions
2. FRP dust
3. Hazardous material storage
4. Hazardous Waste

4.4.1 Styrene Emissions

FRP and rubber lining activities will result in styrene emissions. A styrene emission stack is proposed in the building to deal with any smell that might occur with the use of FRP and rubber lining products. The system will be engineered by Crosbie Engineering Limited and constructed and installed by Jenkins Power Sheet Metal Inc.

The critical ventilation component will be the exhaust hood systems. Local exhaust hoods will be provided at the point of contamination where the process is occurring. Using treated makeup air, the exhaust hood system will be designed in such a way to create an air flow pattern in the area of the process which effectively captures contaminants to be transferred into the hood. The contaminants will be discharged outside the building at a velocity sufficient to disperse the contaminants in an environmentally acceptable fashion.

The size of the exhaust hoods and air flow will match the process equipment size. Makeup air will be supplied at 90% of the exhaust hood capacity to create the required negative pressure to capture contaminants.

4.4.2 General Industrial Ventilation

The general industrial ventilation will consist of exhaust hoods and will be designed to prevent contaminants from escaping into the work place, thereby reducing the need for high air volume dilution ventilation in the building. General ventilation air will be supplied to the building using a standard air handling unit which mixes fresh and re-circulated air. The fresh and re-circulated air will be mixed in proportions sufficient to control any odors, vapors, gases and particulates which may occur. Also, the general ventilation system

A dust extraction system will be used to control the dust generated from trimming, grinding and cutting of FRP material. The FRP area will be a separate workshop, with an isolated ventilation system from the other activities in the building.

4.4.3 Hazardous Material Storage

Raw materials that will be kept on site in a 20 foot sea can located on the property in the lay down area, as per figure 3. Only the required quantities of material for immediate use will be brought into the warehouse, all other material will be placed in the sea can. The sea can will be lined with a chemical resistant layer of fibreglass mat and woven. The fibreglass mat and woven will run up the walls 4 to 6 inch, including at the entrance to the sea can. The fibreglass mat and woven will contain any potential spills, retaining all materials inside the sea can. A 45 gal spill kit will be in the shop area; this will contain absorbent pads, rags and other items for cleaning up spills that might occur in the shop. PEMS will not maintain inventory levels above the quantities listed in Table 1 to mitigate the risk of fire or spills.

4.4.4 Waste and Hazardous Waste

All waste generated will be in compliance with “Best Management Practices for the Storage of Waste Dangerous Goods/Hazardous Waste (WDG/HW) At Business Sites,” prepared by the Department of Municipal Affairs and Environment.

Sources of waste are identified as the following:

- Waste generated from FRP process in solid form;
- General waste; and
- Hazardous waste.

Waste generated from FRP work that is a solid form will be disposed of as special waste at Robin Hood Bay and as per disposal requirements outlined in the Asbestos Waste Disposal Guidance Document. This waste will include: cured/hardened product, rollers, brushes, cardboard, dust from the shop and FRP grinding/trimming, miscellaneous supplies. This waste will be placed in a marked dumpster.

General waste would include waste from lunch rooms, office spaces, etc. this will be disposed of in regular waste disposal and sent to the landfill with municipal waste.

Sources of hazardous waste are identified as the following:

- Solvents used in the cleaning process;
- Resin (uncured)

Table 1. Hazardous materials to be stored on site

Material	Quantity	FPR	Rubber Lining	Styrene Containing
Derakane 510 C				
1787 Paste	4 Gallons	✓		
1788 Brushcoat	10 Gallons	✓		
1789 Resin	15 Gallons	✓		
Derakane 510 N				
0184 Paste	2 Gallons	✓		
1737 Resin	20 Gallons	✓		✓
1762 Black Liner Resin	2 Gallons	✓		✓
1764 Brushcoat	2 Gallons	✓		
1794 Black Paste	1 Gallons	✓		
H1500 Adhesive	10 kits	✓		
H1500C Adhesive	10 kits	✓		
Air dry	1 Gallons	✓		
Acetone	15 Gallons	✓		
470 Resin	35 Gallons	✓		✓
8084 Resin	5 Gallons	✓		✓
411 Resin	5 Gallons	✓		✓
MEKP	12 Gallons	✓		✓
CHP	7 Gallons	✓		✓
DMA	6 Pounds	✓		✓
6% Cobalt Naphthenate	6 Pounds	✓		
Interzinc 52 (Green) 12 Gal	12 Gallons		✓	
Interzinc 52 (Converter)	7 Gallons		✓	
Intergard 345 (Base Light)	5 Gallons		✓	
Intergard 345 (Gray)	5 Gallons		✓	
Intergard 345 (Hardener)	1 Gallons		✓	
Intertherm 228 (Gray)	2.5 Gallons		✓	
200 HS Hardener	2 Gallons		✓	
International Thinner	5 Gallons		✓	
T-10 International Thinner	2.5 Gallons		✓	
LORD Chemlok 205	10 Gallons		✓	
LORD Chemlok 286	15 Gallons		✓	
LORD Chemlok 289	20 Gallons		✓	
LORD Chemlok 290	25 Gallons		✓	

Resin, gel-coat and acetone comes in metal 45 gal drums, once drums are empty they are cleaned with solvent and returned for recycling. Solvents that are used to clean equipment will be stored in 5 gal pails and deposited of at Robin Hood Bay. As stated above, all waste generated will be in compliance with “Best Management Practices for the Storage of Waste Dangerous Goods/Hazardous Waste (WDG/HW) At Business Sites,” prepared by the Department of Municipal Affairs and Environment.

Resin will never be disposed of uncured; however, in the event of an accidental release there will be special compounds such as clay and dry sand on site to absorb spilled materials. Cleanup of large spills will involve specific response procedures. All consumables (hazard and non-hazard) will be disposed of accordance with “Best Management Practices for the Storage of Waste Dangerous Goods/Hazardous Waste (WDG/HW) At Business Sites,” prepared by the Department of Municipal Affairs and Environment.

4.5 Potential Resource Conflicts

There are no identified potential resource conflicts as the proposed area is surrounded by industrial/commercial properties.

4.6 Occupations

Proposed operations will likely include the following occupations, classified as per *National Occupational Classification, 2016*. All listed personnel are anticipated to be direct-hires, if available. Supervisory/management staff will be internal Pennecon Energy resources already in place.

9612 Labourers in metal fabrication – 1

9619 Other labourers in processing, manufacturing and utilities – 6

4.7 Project Related Documents

Not Applicable.

5.0 APPROVAL OF THE UNDERTAKING

No special permits, licenses or approvals are required for this undertaking. We have occupancy

Permit from the Town of Chapel Arm. Modifications to the proposed facility have been submitted for review to Service NL for Fire and Life Safety and Building Accessibility requirements.

6.0 SCHEDULE

Registration Document Submission	September 2017
Government Review and Decision	October 2017
Operations	October 2017

7.0 FUNDING

The approximate cost of the project will be \$300,000 CAD. The funding for this project will be provided by Pennecon Energy Limited.

8.0 SUBMISSION

Date

Name: Mr. Mark Duff
Position: Manager Finance and Administration