# PHASE 2 INITIAL BOREHOLE DRILLING AND TESTING AT IG\_BH04/05/06, IGNACE AREA

WP01 Commissioning Report - Site Infrastructure Setup for IG\_BH04

APM-REP-01332-0293

June 2021

Golder Associates Ltd.



NUCLEAR WASTE SOCIÉTÉ DE GESTION MANAGEMENT DES DÉCHETS ORGANIZATION NUCLÉAIRES

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### REPORT

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WP01 Commissioning Report - Site Infrastructure Setup for IG\_BH04

Submitted to:

### **Nuclear Waste Management Organization**

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# WP01B COMMISSIONING REPORT SITE INFRASTRUCTURE SETUP FOR IG\_BH04

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# 1.0 BACKGROUND

The Phase 2 Initial Borehole Drilling and Testing at IG\_BH04/05/06, Ignace Area project is part of the Phase 2 Geoscientific Preliminary Field Investigations of the NWMO's Adaptive Phased Management (APM) Site Selection Phase.

This project involves testing of deep borehole IG\_BH04 and the drilling and testing of deep boreholes IG\_BH05 and IG\_BH06 in the Ignace area within the identified Revell Potential Repository Area (PRA). The work comprises a total of eleven work packages and is being carried out by a team led by Golder Associates Ltd. (Golder) on behalf of the NWMO. The overall program at IG\_BH04 is described in the Borehole Characterization Plan (BCP) for IG\_BH04 (Golder 2021a). The Ignace area is located a direct distance of approximately 21 km southeast of the Wabigoon Lake Ojibway Nation and a direct distance of 43 km northwest of the Town of Ignace. Access to the area is via Highway 17 and primary logging roads, as shown on Figure 1.



Figure 1: The Ignace area – access roads and drill sites for IG\_BH04, IG\_BH05 and IG\_BH06.

#### 2.0 **OBJECTIVE**

This report describes the site commissioning activities at borehole IG BH04. Site commissioning activities included the setup of security fencing, office trailers, washrooms, fuel storage, light towers, shipping containers, drill rig, site communications, and electrical distribution systems.

As stated in WP01 Test Plan - Site Infrastructure for IG BH04/05/06 (Document No. APM-PLAN-01332-0373) (Golder 2021b), a site commissioning technical report is to be submitted for each of the drill sites to document the preparation and setup of site infrastructure. Details regarding the site services, electrical configuration, and asbuilt data are provided within this report.

#### 3.0 SITE HISTORY

Construction of the drill pad for IG BH04 including clearing and grubbing, the placement of silt fencing, ditching, placement of a granular base, grading and compaction of the site, was previously completed under separate contract to the NWMO in October 2019. The site was used for a borehole drilling program spanning from October 2019 until March 2020, after which the party responsible for the drilling program demobilized from the site. The site remained vacant under third party care, custody and control from October 2019 until NWMO accepted the care, custody and control on April 1, 2021.

On April 1, 2021. A WP01 kickoff meeting and site inspection was conducted with representatives from the NWMO, Wabigoon Lake Ojibway Nation (WLON), Golder, and Rodren Drilling Ltd. (Rodren). The purpose of the site inspection was to identify current site conditions, and to allow for planning of the site setup, which was scheduled to start the following week. During the site inspection, stained fill materials of potential environmental concern were identified at several locations around the IG BH04 site, which were presumed to have occurred during the borehole drilling program performed by other parties from October 2019 until March 2020. It was also noted that the access road to site would require some upgrades, and that the silt fencing installed around the site would require some repairs.

Golder accepted care, custody and control of the site from the NWMO on April 1, 2021 and completed the excavation and removal of stained fill materials of potential environmental concern on April 6 and 7, 2021. A technical memorandum outlining the excavation of stained fill materials at IG\_BH04 will be provided to the NWMO under a separate cover.

#### 4.0 SITE PREPARATION AND SETUP

This section provides a summary of site infrastructure setup for IG BH04. Photographs of the IG BH04 site taken during site setup and commissioning are provided in Appendix A, an aerial view of the as-built site setup is provided in Appendix B, and the Site Commissioning Checklist for IG BH04 is provided in Appendix C.

#### 4.1 Security Fencing

Approximately 190 m (620') of 2.5 m (8') tall fencing was installed around the perimeter of the site to define the work area, provide security and to discourage wildlife from entering the site. A lockable gate was installed on the southwest side of the site, to allow worker access to the site from the parking lot (Appendix A, Photo 1).



In addition to the perimeter fencing, approximately 70 m (230') of 1.8 m (6') tall fencing was installed around the drill rig area to define an exclusion zone (Appendix A, Photo 2).

Safety signage was installed at the entrance to site, and at defined areas such as the muster station, no-smoking areas, and designated smoking areas. The safety signage mounted at the entrance gate is shown in Appendix A, Photo 3.

#### 4.2 Silt Fence Repair

On May 6, 2021, Ricci Trucking repaired the silt fence around IG BH04 work site. The work was conducted as a scope change to the project under Golder supervision.

#### 4.3 **Temporary Site Infrastructure and Facilities**

An aerial imagie showing the as-built site layout, along with with a listing of the main site infrastructure elements, is provided in Appendix B.

#### **Office Trailers** 4.3.1

A 12 x 3 m (40 x 10') mobile office trailer was set up on the south corner of the site and two 7.3 x 3m (24 x 10') mobile office trailers were set up on the northeast corner of the site. The office trailers functioned as field offices for Golder, NWMO/WLON, and Rodren Drilling, respectively. The office trailers were heated and air conditioned, have electrical power, cellular communication, and internet service via the local cellular network (Appendix A, Photo 4 & Photo 5).

#### 4.3.2 Seacans for Technical Workers

Two 12 x 2.5 m (40 x 8') modified shipping containers (seacans) were placed at the north corner of site near the drill rig and function as working space all the work packages activities. The seacans were modified with doors, windows, insulation, electrical power, heating, and air conditioning (Appendix A, Photo 6). The seacans were used as working, office and laboratory space, and for the storage of equipment and samples.

Internet communication was provided to the seacans through a Wi-Fi repeater which was connected to the cellular internet system located in the NWMO/WLON site trailer through CAT-6 cables. The seacans were outfitted with two commercial refrigerators, and one freezer, which were required to store water samples collected as part of the testing program. The refrigerators temperatures were set to be 4°C and the freezer to be -18°C. The refrigeration system was used for temporary sample storage until the samples could be shipped off site to the appropriate laboratories or archives.

An additional 6 x 2.5m (20' x 8') seacan was mobilized to site for general equipment storage, but was not equipped with power, heat, or air conditioning.

#### 4.3.3 **Drilling Facilities**

Prior to arrival of the drill rig on site, the drill pad was set up with a secondary containment system which was constructed on site to capture any drill fluid spills that could potentially occur at the drill or drill fluid circulation system. The system was designed with a central sump and the drill pad was graded to slope into the central sump. The containment liner consisted of two rubber layers, each layer was sealed to the outer casing of the borehole to prevent leaks through the liner (Appendix A, Photo 7).

Any drill fluid spills that occurred on the drill pad could be collected in the central sump and then pumped into a wastewater storage tank, as required. The secondary containment system provided approximately 200 m<sup>2</sup> (2,150



 $ft^2$ ) of lateral coverage, large enough to encompass the footprint of the drill rig, AMC SRU Centrifuge Recycling Unit, wastewater tank, and fluorescein tank. The wastewater and fluorescein tanks were stored in a 6 x 2.5 m (20 x 8') seacan located on the drilling rig secondary containment (Appendix A, Photo 9).

The secondary containment system was primarily for collecting spills of drill fluid or fluorescein traced water and was not intended to provide primary containment for potential spills of hazardous materials such as oils or fuels. Hazardous materials such as oil and fuel were placed within their own secondary containment and were protected from the elements using a portable car shelter or shipping container. Wooden matting was placed over top of the central sump area, to provide a level and solid foundation for the drill rig infrastructure.

Upon the completion of the secondary containment, a steel drill water sump was constructed at the borehole collar (welded to the outer casing (appendix A, Photo 8) to capture drill fluid as it exited the borehole during drilling and testing. Drill fluid was pumped from the drill water return sump into the centrifuge unit where drill cuttings are removed. Once the cuttings were removed from the drill water, the water was recycled back into the drill water tank and into the borehole.

The drill rig was a rotary EF-75 manufactured by Discovery Drill Manufacturer (DDM) LTD in 2011 (Appendix A, Photo 10). The drill was oriented over the previously drilled borehole, at dip of 70° from horizontal and azimuth of 110° degrees (Appendix A, Photo 11).

Items inside the drill rig area included the drill rig, drill rods and tooling, the wastewater and fluorescein tanks seacan, centrifuge unit, and drill cuttings storage. The drill rig area was also used for storage of drilling supplies.

Drill water was stored in two 28,350 litre Baker tanks located on the west side of the site (Appendix A, Photo 12). The Baker tanks were initially filled in with fresh water sourced from the Township of Ignace municipal supply. One tank (primary tank) was primarily dedicated to receiving the source water, while the other (secondary tank) was primarily dedicated to the storage of fluorescein traced drill water.

### 4.3.4 Washrooms

During the setup of the site facilities, two temporary portable toilets were provided for use by site workers. A heated and self-contained washroom trailer was later delivered to site once the electrical distribution system was operational. The washroom trailer was divided into two units with separate entrances, each containing one toilet and one sink. The washrooms were serviced for water and waste once a week and cleaned twice per week (Appendix A, Photo 13).

### 4.3.5 Site Communications

A Uniden cellular signal booster was installed on the top of the light tower near Golder's site trailer, to improve cellular reception to the site. Internet services were provided on-site using two Bell Canada ZTE MF288 Turbo Hub cellular internet receivers, located in the Golder and NWMO/WLON site trailers, respectively. The signal strength was generally good, with the nearest communication tower located about 4.8 km east of the site and the use of a cellular booster to further improve the signal. An internet speed test was conducted and the typical download speed on site was found to be 7.2 and 6.6 Mbps. In the event of failure of cellular service, emergency communication was still possible using a Garmin In-Reach SE satellite messaging device, located in the Golder office trailer.



#### POWER SUPPLY AND DISTRIBUTION 5.0

#### 5.1 **Power Generation**

The site was powered by MQ WhisperWatt 70 diesel-electric generator, which supplied 56 kW (70 kVA) of 120 V single-phase output. It was used to power the site office trailers, core storage seacans, washroom trailer, and a portable power system on the drill pad. The location of the generator was chosen to minimize the length of electrical distribution cables, to protect the generator from vehicular traffic, and to allow for access by truck in the event that the generator required repairs or replacement (Appendix A, Photo 14).

#### 5.1.1 **Fuel Supply**

A 4,500 L double-walled fuel storage tank was located adjacent to the generator, so that refueling of the generator could be performed directly from the fuel storage tank. The fuel tank and generator were placed inside a secondary containment berm with containment capacity of 5,460 L, sufficient to contain the maximum amount of fuel and oil in the system. The fuel tank was surrounded by concrete barricades to protect it from vehicular traffic and heavy machinery. The generator and fuel storage tank is shown in Appendix A, Photo 15.

During the site set up, an additional 4,500 L double-walled fuel storage tank ordered by Rodren was temporarily stored on the IG\_BH04 pad. The tank remained empty until it was transferred to IG\_BH05 (Appendix A, Photo 16).

#### 5.2 **Power Distribution**

Set up of the electrical distribution system from the generator to the site facilities was performed by Fediuk Electric under the direction of Justin Fediuk, Master Electrician License #6002843. Power was distributed to the site facilities via double jacketed electrical cables. The majority of the power lines were mounted to the site perimeter fence. In areas where the electrical lines passed through a trafficable area, they were buried underground inside ABS conduit (Appendix A, Photo 17)

A load analysis was conducted by the electrician and it was determined that the generator would meet all power requirements at the site, including a 10% contingency when running at approximately 80% of its rated capacity, which was considered to be sufficient.

#### 5.3 Site Illumination

Three 4-kW - Wacker Neuson Metrolite LTV4 diesel powered light towers with LED lights were installed at the site to provide outside illumination during work at night. The light towers were positioned to provide an even distribution of light (Appendix A, Photo 18). The light tower placement also considered: ground stability, level of activity in the area, and the ability to access the light towers by truck for refueling or repairs. The light towers were all placed within their own secondary spill containment. The containments were sized so that the entire light tower footprint would be within containment, and the containment capacity (2,800 L) exceeded the maximum volume of fuel and oil within the light towers (180 L) (Appendix A, Photo 19).

#### 5.4 **Ground Fault Protection**

Exterior power outlets on the office trailers, and outlets located inside the washrooms were outfitted with ground fault circuit interrupters (GFCI). Additional protection was also provided to workers through the use of portable GFCI power bars, which were installed inside office trailers or seacans in the event that testing activities created wet conditions inside the trailers.



## 5.5 Power Generation at the Rig Area

The drill rig and the centrifuge unit were both diesel-powered units, fueled, monitored and maintained by Rodren. The main site electrical distribution system provided power at the drill rig area via six GFCI outlets, for use during testing activities.

# 5.6 Electrical Safety Authority (ESA)

The ESA inspection was completed on May 19, 2021. ESA Certificate of Acceptance was provided to Golder on June 13, 2021 (Appendix D).

# 6.0 HEALTH AND SAFETY EQUIPMENT

# 6.1 Health And Safety Equipment

Health and safety equipment at site included signage posted at the entrance to site which identified restricted areas, the site muster point, non-smoking areas, designated smoking areas, and PPE requirements. Personal protective equipment such as hard hats, hearing and eye protection, gloves, and high visibility clothing were available from Golder for workers and visitors if they had not arrived with the required equipment.

Emergency response equipment was also provided around site. Eye wash stations were provided in site offices and work areas. First aid kits were provided in each of the site offices and work areas. Fire extinguishers were located at fuel storage tanks, washrooms, smoking area, auxiliary generator and fuel tank, core storage seacans, site offices, and proximal to light towers and other fuel burning equipment. Eye wash stations, first aid kits, and fire extinguishers were maintained and inspected as part of regular site operations.

## 6.2 COVID – 19 Prevention and Mitigation Measures

As per Golder's COVID-19 Safe Work Method Statement (Golder 2021c), the site was supplied with non-medical face masks, disinfecting spray, paper towels, and disposable gloves for all the site workers and vistors, and were distributed across site in all work areas.

Work stations in all the site trailers and core storages were equipped with hand sanitizer dispensers, disinfecting sprays and paper towels, and workers were required to disinfect their work areas at the begining and the end of their shift. Signs were posted on building entrances indicating the maximum occupancy for that area (Appendix A, Photo 20). COVID-19 information and protocols were posted in site trailers and seacans to remind workers of requirements (Appendix A, Photo 21).

## 7.0 WASTE AND CHEMICAL STORAGE

### 7.1 Solid Waste

Solid waste was managed using one garbage bin and one recycling bin located near the front entrance to the site, for ease of access by the garbage and recycling truck. The bins were both located inside the fenced area and had lids which could be secured to prevent access by animals. The bins were sourced by B&M Deliveries of Dryden, Ontario, and waste material was transported by B&M Deliveries to the Dryden Landfill Site, located southwest of Dryden, Ontario (Appendix A, Photo 22).



## 7.2 Spill Response

Two petroleum hydrocarbons spill kits (359 L each) were placed beside the site fuel supply and generator, and a universal spill kit was set up near the drill rig area. Two bins full of sawdust were also placed by the washroom trailer to manage potential spills in that location. Four additional portable spill kits were placed in Golder's site trailer and storage seacans for fast spill response, if required (Appendix A, Photo 15).

## 7.3 Hazardous Chemical Storage

Hazardous chemicals were primarily stored in two locations. All hazardous products associated with the operation of the drill rig were stored in the drilling area, inside secondary containment. All products associated with water testing were stored in the WP02 work seacan. Minor consumer quantities of cleaning supplies were also stored in the site offices and washrooms. Copies of all Safety Data Sheets (SDS) for hazardous materials were kept on site in the Golder office trailer, and where applicable, copies also kept directly with the products for quick reference.

### 8.0 SUMMARY

This report describes the site preparation and setup for IG\_BH04 including field offices, power, utilities communications systems, health and safety equipment, and perimeter fencing. The site setup for IG\_BH04 was completed on April 17, 2021, with a formal inspection and commissioning by Golder on April 20 and 21, 2021 respectively. An aerial view of the commissioned site (looking to the NE) is presented in Appendix A, Photo 24.

## 9.0 REFERENCES

- Golder (Golder Associates Ltd.), 2021a. Phase 2 Initial Borehole Drilling and Testing at IG\_BH04/05/06, Ignace Area. Borehole Characterization Plan for IG\_BH04.
- Golder, 2021b. WP01 Test Plan Site Infrastructure for IG\_BH04/05/06 (NWMO Document: APM-PLAN-01332-0373), March 2021.
- Golder, 2021c. COVID-19 Safe Work Method Statement Appendix G. Found in: Phase 2 Initial Borehole Drilling and Testing at IG\_BH04/05/06, Ignace Area, Health, Safety, Security and Environment Plan, (NWMO Document: APM-PLAN-01332-0372), March 2021.
- Province of Ontario, 1990, Environmental Protection Act R.R.O. 1990, REGULATION 347 GENERAL WASTE MANAGEMENT, 1990.



APPENDIX A

# IG\_BH04 Site Setup Photos





Photo 1 - Security Fence with the Lockable Gate



Photo 2 - Drilling Rig Area Security Gate





Photo 3 - Safety Signage at the Security Gate



Photo 4 - Golder's Site Office Trailer





Photo 5 - NWMO/WLON Site Office Trailer



Photo 6 - Core Logging and Storage Seacans





Photo 7 - Double Sealed Liner



Photo 8 - Steel Sump - Welded





Photo 9 - Drilling Rig Area Secondary Containment Setup



Photo 10 - Drilling Rig





Photo 11 - Drilling Rig Positioned on IG\_BH04



Photo 12 - Water Tanks





Photo 13 - Site Washroom Trailer



Photo 14 - Power Generator Setup





Photo 15 - Fuel Tank, Concrete Barricades, Spill Kits and Fire Extinguisher



Photo 16 - Additional Double Wall Fuel Tank was Stored on Site.





Photo 17 - Electrical Power Setup



Photo 18 - Site During Darkness with Light Towers Lighting the Site





Photo 19 - Light Tower in a Secondary Containment



Photo 20 - Maximum Capacity Sign at Golder's Office Entrance





Photo 21 - COVID-19 Information Board Posted in all the Site Trailers.



Photo 22 - Garbage and Recycling Bins Near the Site Gate for Easy Access





Photo 23 - Drill Cuttings Storage Area



Photo 24 - A Site Overview Looking NE



APPENDIX B

# IG\_BH04 As-Built Site Facilities Layout



# As-Built Site Facilities Layout - IG\_BH04



1	Light Towers- 4-kW - Wacker Neuson Metrolite LTV4	12	Security Fence - $\sim$ 190 linear metres of 2.5 m tall fence
2	Power Generator – 40 kW - MQ WhisperWatt 70	13	Tailgate Meeting Area
3	Fuel Tank - 4,500 L double-walled fuel storage tank	14	Site Washroom Trailer
4	Golder's Site Trailer - 40' x 10' mobile office trailer	15	Drill Cuttings Storage - drilling cuttings stored in 1m <sup>3</sup> tote bags that are stored in secondary containment
5	NWMO/WLON Site Office - 24' x 10' mobile office trailer	16	Drill Rods Sloop and Tooling – moving when capturing the photo
6	Rodren Drilling Site Office - 24' x 10' mobile office trailer	17	Drill Rig - Skid Mount rotary drill model EF-75 by Discovery Drill Manufacturer (DDM) LTD in 2011
7	Core Logging/Workstations Seacan - 40' x 10' modified shipping containers	18	Centrifuge Unit - AMC SRU Centrifuge Recycling Unit
8	General Storage Seacan - 20' x 8' seacan	19	Wastewater, and Fluorescein Tanks Seacan - 20' x 8' seacan
9	Water Tanks - two 28,350 litre Baker tanks	20	Silt Fence
10	Solid Waste Bins - one garbage bin and one recycling bin	21	Parking Lot – 8 regular site pickups
11	Site Security - One lockable gate	Ð	IG_BH04 Location

APPENDIX C

IG\_BH04 – Drill Site Commissioning Checklist



ltem No.	Item	General Requirements	Date Commissioned	Checked by	Approved by	Comments
1.0	SITE INSPECTION					
1.1	Fill materials present	Fill materials found on site will not produce airborne dusts during dry weather or muddy slip surfaces during wet weather	18 April 2021	Shady Hashem	GWS	
1.2	Litter and debris	There is no visible or buried litter or debris observed at the site	19 April 2021	Shady Hashem	GWS	
1.3	Silt and Snow Fencing	Silt and snow fencings are in place and are functioning as intended	N/A	Shady Hashem		Silt fence needs to be repaired – waiting for a quote from Ricci
1.4	General site levelling	site levelling Site generally levelled to allow placement of surface facilities and safe movement between facilities		Shady Hashem	GWS	Drilling pad is leveled with safe access path slope.
1.4	General Site Drainage	Site grading allows for adequate drainage without ponding	18 April 2021	Shady Hashem	GWS	Drilling pad is sloped at 2% for rainwater run off.
2.0	FENCING					
2.1	Silt fencing	Silt fencing around site perimeter, properly installed and in good order	NA	Shady Hashem		Silt fence needs to be repaired – waiting for a quote from Ricci
2.2	Snow fencing	Snow fencing around site perimeter, properly installed and in good order	NA	NA	NA	NA
2.3	Modulok security fencing	Security fencing around required areas, drill area separated, properly installed and in good order	18 April 2021	Shady Hashem	GWS	Security fences around the drilling area and the pad are in good condition.
3.0	<b>OFFICE TRAILERS</b>					
3.1	Trailer 1 (Golder)	Trailer correctly positioned, blocked and levelled, stairs installed, furnishings supplied meet requirements, heated	18 April 2021	Shady Hashem	GWS	Runs on the electric heaters until the propane tank gets installed.
3.2	Trailer 2 (NWMO)	Trailer correctly positioned, blocked and levelled, stairs installed, furnishings supplied meet requirements, heated	18 April 2021	Shady Hashem	GWS	Runs on the portable electric heaters until the propane tank gets installed.

ltem No.	ltem	General Requirements	Date Commissioned	Checked by	Approved by	Comments
3.3	Trailer 3 (Rodren)	Trailer correctly positioned, blocked and levelled, stairs installed, furnishings supplied meet requirements, heated	18 April 2021	Shady Hashem	GWS	Runs on the portable electric heaters until the propane tank gets installed on the 19 <sup>th</sup> of April 2021
4.0	CORE LOGGING AND STORAGE					
4.1	Core Logging Seacan	Seacan correctly positioned, blocked and levelled, interior meets requirements, heated	18 April 2021	Shady Hashem	GWS	No core logging activities, the water sampling seacan. Runs on construction electric heaters by design.
4.2	Core Logging Table	Core logging table meets design specifications, correctly installed	NA	NA	NA	NA
4.3	Camera Racking	Camera tracking correctly installed, meet performance criteria	NA	NA	NA	NA
4.4	Core Storage Seacan	Seacan correctly positioned, blocked and levelled, interior meets requirements, heated	18 April 2021	NA	NA	Runs on construction electric heaters by design.
4.5	Commercial Refrigerator	Refrigerator installed correctly, operating correctly, provides adequate storage capacity	17 April 2021	Shady Hashem	GWS	Adjusted to the proper temperature as per the test plans
5.0	COMMUNICATIONS	· · · · ·				
5.1	Satellite phone	Phone is installed and functioning correctly	NA	NA	NA	NA
5.2	Cellular internet	Cellular Internet Wi-Fi network is installed and functioning correctly, reception is adequate in all required areas of the site	18 April 2021	Shady Hashem	GWS	Reception is weaker when it is cloudy
6.0	GENERATORS					
6.1	Generator	Generator installed and functioning correctly, installation completed by an electrician, and certified by electrician to meet codes	16 April 2021	Shady Hashem	GWS	
6.2	Secondary containment	Secondary spill containment in place beneath fuel tank, correctly installed, of adequate capacity	15 April 2021	Shady Hashem	GWS	

ltem No.	ltem	General Requirements	Date Commissioned	Checked by	Approved by	Comments
6.3	Power distribution	Power distribution panel installed and functioning correctly, installation completed by an electrician, and certified by electrician to meet codes	15 April 2021	Shady Hashem	GWS	
7.0	LIGHT TOWERS					
7.1	Light Tower	All light towers installed and functioning correctly, installation completed by an electrician, and certified by electrician to meet codes	15 April 2021	Shady Hashem	GWS	Due to some extra lights on the drilling rig, the site can run with 3 light towers instead of 4 in a safely manner
7.2	Secondary containment	All secondary spill containment in place beneath fuel tank, correctly installed, of adequate capacity	15 April 2021	Shady Hashem	GWS	Due to some extra lights on the drilling rig, the site can run with 3 light towers instead of 4 in a safely manner
8.0	FUEL STORAGE					
8.1	Fuel tank	Fuel tank correctly installed, blocked and levelled	15 April 2021	Shady Hashem	GWS	
8.2	Secondary containment	Secondary spill containment in place beneath fuel tank, correctly installed, of adequate capacity	15 April 2021	Shady Hashem	GWS	
8.3	Protective barricade	Tank is adequately protected from inadvertent collision with mobile equipment	15 April 2021	Shady Hashem	GWS	
9.0	SANITARY FACILITIES					
9.1	Washroom	Washroom correctly positioned, blocked and levelled, stairs installed, toilets and sinks functioning correctly, heated	17 April 2021	Shady Hashem	GWS	
9.2	Water tank	Water tank building correctly positioned, blocked and levelled, correctly connected to the washroom building, heated	17 April 2021	Shady Hashem	GWS	
9.3	Septic tank	Septic tank building correctly positioned, blocked and levelled, correctly connected to the washroom building, heated	18 April 2021	Shady Hashem	GWS	
10.0	GARBAGE BINS					
10.1	Garbage Bin	Bin placed in suitable location, secure lid	18 April 2021	Shady Hashem	GWS	Bins are not lockable, but ok

ltem No.	ltem	General Requirements	Date Commissioned	Checked by	Approved by	Comments
10.2	Recycling Bin	Bin placed in suitable location, secure lid	18 April 2021	Shady Hashem	GWS	Bins are not lockable, but ok
11.0	SPILL KITS					
11.1	Drill fluid kit	Spill kit components present, size and type meets requirements	18 April 2021	Shady Hashem	GWS	
11.2	Fuel kit	Spill kit components present, size and type meets requirements	18 April 2021	Shady Hashem	GWS	
11.3	General (chemical) kit	Spill kit components present, size and type meets requirements	18 April 2021	Shady Hashem	GWS	

Checked by:

Shady Hashem

Date: 20 April 2021

Juge Schul

Approved by:

Date: 21 April 2021

APPENDIX D

# IG\_BH04 - ESA Inspection Letter



### Page 1 of 1



400 Sheldon Dr, Unit 1, Cambridge, ON, N1T 2H9 Toll Free Tel: 1-877-372-7233 Toll Free Fax: 1-800-667-4278 esa.cambridge@electricalsafety.on.ca

## **Certificate of Acceptance**

### FEDIUK ELECTRIC INC

SITE 124 BOX 6 RR4 DRYDEN ON P8N 0A2

Notic	ce Da	te:		Jun	e 08, 2	2021	
Notif	ficatio	n Numt	per:	171	00667		
Cust	tomer	ID:		105	525		
Lice	nce N	umber:		701	3430		

Telephone: (807)221-8110 Fax: Email:

RE

**BORE HOLE 4** 

BORE HOLE 4 TOWER RD IGNACE ON

We hereby certify that the electrical installation at the aforementioned address, and as described herein, is accepted in accordance with the requirements of the Ontario Electrical Safety Code.

Work Item	Description	Quantity
1	OUTLETS AND OTHER DEVICES	
	Receptacles 3.000	3
	LV DISTRIBUTION EQUIPMENT	
2	- 200 AMPS	1
	Panelboards 1.000, 200 AMPS	· .
3	CONSTRUCTION TRAILER	5

The Electrical Safety Authority (ESA) operates as a delegated authority on behalf of the provincial government in accordance with Part VIII, section 113 of the Electricity Act, 1998, S.O. 1998, c.15, Sched. A.(the Act), and the Safety and Consumer Statutes Administration Act, 1996, S.O. 1996, c.19. ESA's mandate is to administer the Act and corresponding Regulations on behalf of the Province of Ontario.

ESA is a not-for-profit corporation under the direction and control of a Board of Directors and is accountable to the Ministry of Government and Consumer Services in accordance with an Administrative Agreement.



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