

Environmental Impact Assessment Registration Document

McLaughlin Soil Management Facility

Revised Registration Document – 2017 03 07

File # 24561-3-1408

1.0 THE PROPONENT:

1.1 Name of Proponent: McLaughlin Soil Management Facility Ltd.
304 Kelly Road,
Grand Falls, NB,
E3Z 1K3.

1.2 Chief Executive Officer: Mr. Danny McLaughlin
President
Phone: 506-473-5409
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1.3 Principal Contact Persons: McLaughlin Soil Management Facility Ltd.
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Craig Hydrogeologic Inc.
Mr. Douglas Craig
140 Meadow Cove Road
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Cell Phone: 506-333-2844
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1.4 Land Ownership: The site PID 65214801 is owned by McLaughlin Soil Management Facility Ltd.

2.0 THE UNDERTAKING

2.1 Name of the undertaking: McLaughlin Soil Management Facility Ltd. This is an existing facility which currently accepts hydrocarbon contaminated soils from New Brunswick. The purpose of this EIA Registration is to obtain approval for accepting hydrocarbon contaminated soils from Quebec, Nova Scotia and Maine in addition to the currently approved hydrocarbon contaminated soils from New Brunswick.

2.2 Project overview: The proposed project consists of accepting and subsequently treating hydrocarbon contaminated soils and using the remediated soils on site at the McLaughlin Soil Management Facility and the adjacent Construction and Demolition Debris disposal site. The hydrocarbon contaminated soil would be potentially sourced from New Brunswick, Quebec, Nova Scotia, and Maine. The contaminated soil would be brought in by dump trucks on existing highways and roadways. No new roadways, entrances or exits are required.

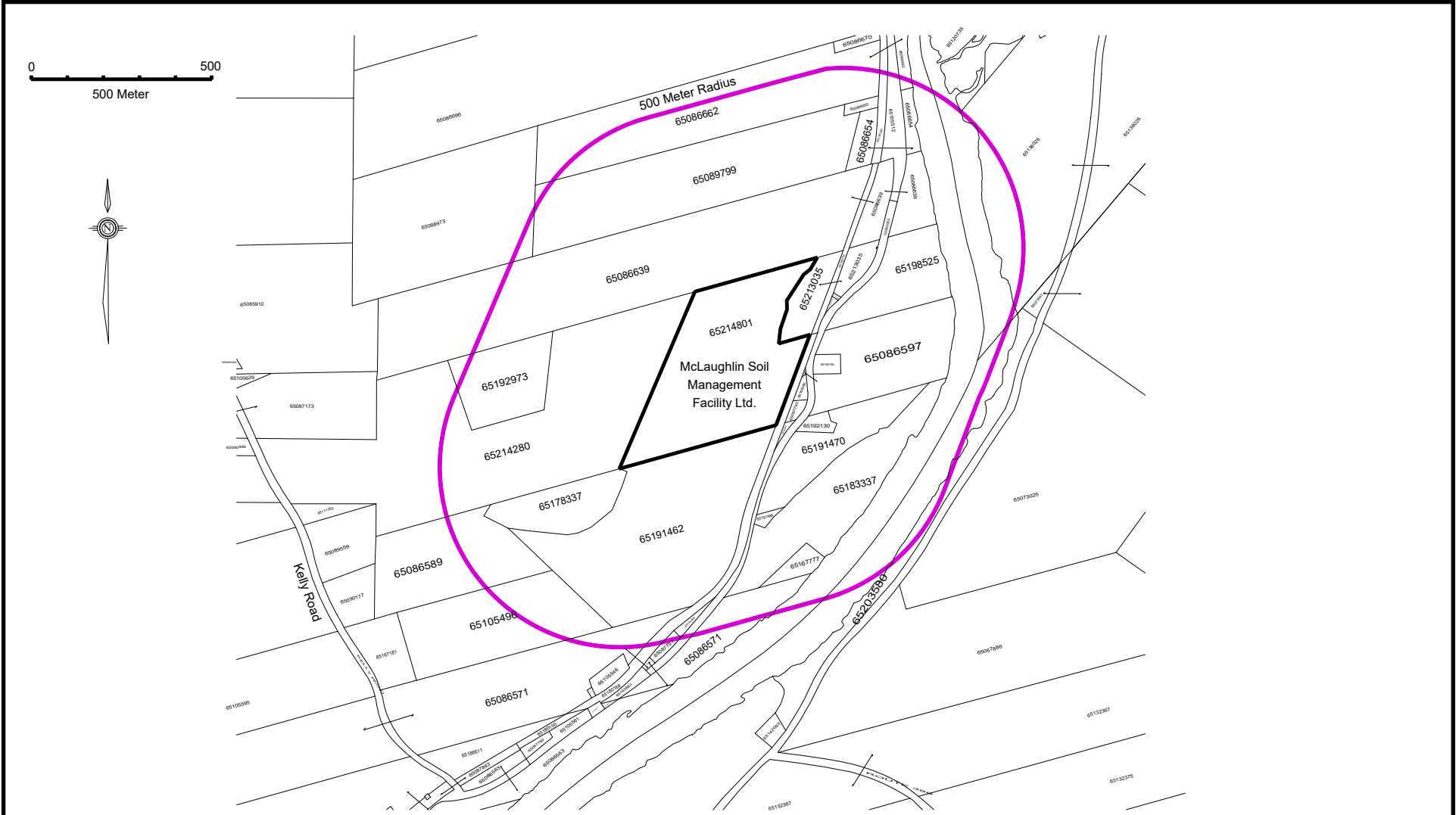
2.3 Purpose/Rationale/Need for the undertaking: The site already exists. Enlarging its potential catchment area would increase its economic benefit to the owners and surrounding communities.

2.4 Project location: The proposed project is located on privately owned land identified by Service New Brunswick (SNB) as PID 65214801, located east of Kelly Road, south of Grand Falls, N.B. Figure 1 shows the location of the PID, Figure 2 is an aerial photo (2006) showing the general site location.

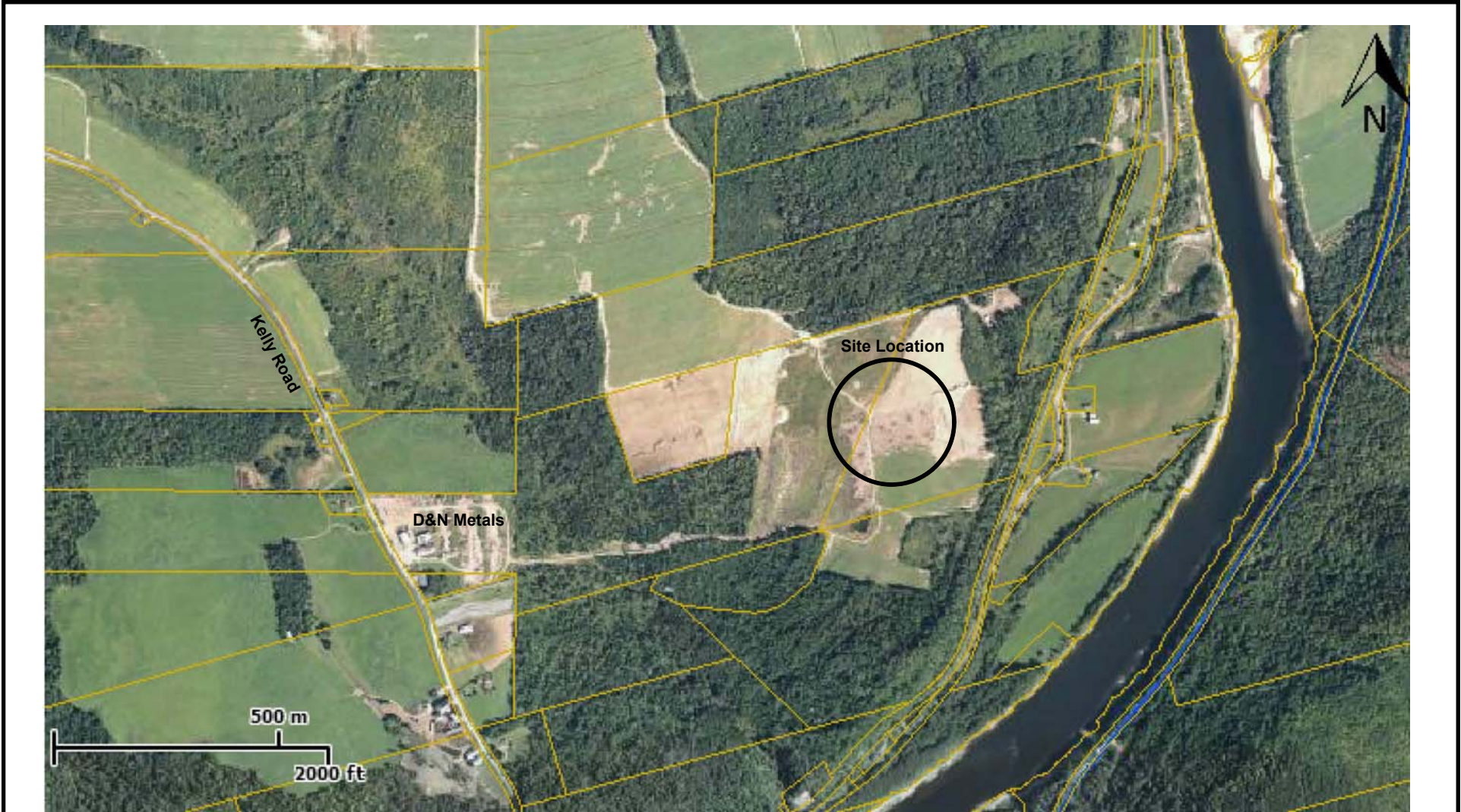
The Soil Treatment Facility has an existing lagoon, oil water separator, and engineered wetland swale into which the runoff from the facility is treated.

2.5 Physical components and dimensions of the project: Figure 3 shows the existing physical components and dimensions of the soil treatment facility. The main project steps or parts include:

- Transportation of hydrocarbon contaminated soil,
- Physical and biological treatment of hydrocarbon contaminated soil on site,
and
- Usage of treated soil on site.



Project: McLaughlin Soil Treatment	500 Meter Radius Around McLaughlin Soil Managemen Facilityt		<i>Craig HydroGeoLogic Inc.</i>
	Scale: As Shown	Figure: 1	
	Date: March 4, 2015		



Project: McLaughlin Soil Treatment	figure 2: Aerial Photo, Site Location (2006 Photo)		<i>Craig HydroGeoLogic Inc.</i>
	Scale: As Shown	Figure: 2	
	Date: March 17, 2015		

The project steps are summarized below

Transportation of hydrocarbon contaminated soil: The hydrocarbon contaminated soil will be brought to the facility by trucks. The hydrocarbon contaminated soil would be potentially sourced from New Brunswick, Quebec, Nova Scotia, and Maine. The contaminated soil is the result of accidental spills and/or unauthorized releases and the cleanup or remediation of such events requires the transportation of the contaminated soil to approved treatment facilities. Such transportation is already occurring, expanding the catchment area of the existing facility should result in a reduction in overall haulage distance and a concomitant reduction in the environmental impact of such haulage. This is based on the observation that site managers will usually send any contaminated soil to the closest, most cost-effective treatment site.

Physical and biological treatment of hydrocarbon contaminated soil: Hydrocarbon contaminated soil will be transported from spill sites to the treatment site and placed in windrows on the impervious asphalt pad. The contaminated soils are mixed with nutrient materials and periodically turned or mixed to facilitate natural bioremediation. When it appears that the soils are sufficiently remediated, they are sampled and analyzed for BTEX and modified TPH. If the results are below the provincially established criteria, the soils are used on site, typically as cover in the adjacent Construction and Demolition Disposal Site.

Treated Soil Criteria:

Benzene	0.16 mg/kg	Modified TPH	140 mg/kg (as gasoline)
Toluene	14 mg/kg	Modified TPH	220 mg/kg (as Diesel, #2 fuel oil)
Ethylbenzene	58 mg/kg	Modified TPH	970 mg/kg (as #6 oil)
Total Xylenes	17 mg/kg		

The above soil criteria are from Atlantic RBCA Tier 1 RBSL look-Up Table, September 2003: Table 7 Residential, Non-Potable, Coarse -grained Soil,

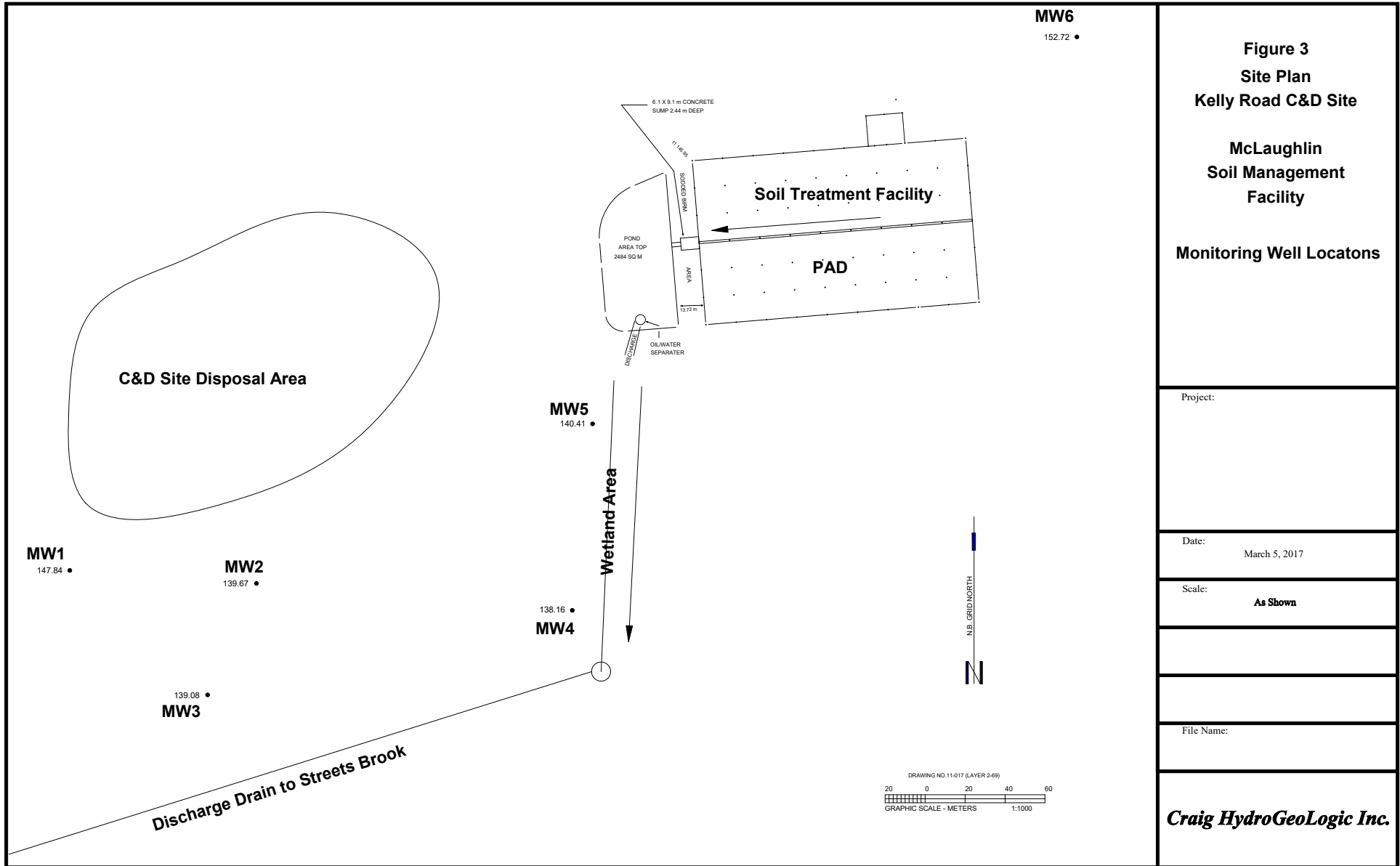
Any precipitation falling on the contaminated soil treatment piles or on the impervious pad between the windrows flows into a water treatment/holding lagoon. The lagoon was designed with enough capacity to contain up to six to eight months of runoff from the impermeable pad. The discharge from the lagoon is from the bottom of the lagoon through an oil/water separator and out into what is an engineered polishing wetland as shown in Figure 3. The discharge water flows down slope to finally discharge at the "discharge point" as shown in Figure 3. Two monitoring wells are installed adjacent to the polishing treatment wetland swale as shown in Figure 3. Prior to water being batch discharged from the lagoon it must meet the following criteria.

Treated Water Criteria:

Benzene	5 µg/L	Modified TPH	1,100 µg/L
Toluene	24 µg/L	Mod#6 oil)	
Ethylbenzene	2.4 µg/L		
Total Xylenes	300 µg/L		

The above water BTEX criteria are from Atlantic RBCA Tier 1 RBSL look-Up Table, September 2003: Table 7 Residential, Non-Potable, Coarse -grained Soil,

2.6 Project Schedule: It is proposed that the bioremediation facility start receiving contaminated soils from the expanded catchment area as soon as approval is obtained. No new construction is required on site.



3.0 DESCRIPTION OF EXISTING ENVIRONMENT

3.1 Atmospheric Environment: The site no stacks or other point atmospheric discharges. The site is remote from existing houses and residences and slight hydrocarbon odours related to operation should not be problematic. Any associated noise at the site will be remote from potential receptors and attenuated by distance and the surrounding wooded areas and should not result in significant or measurable impacts on residential areas.

3.2 Biophysical Environment: The site is the existing soil bioremediation facility (McLaughlin Soil Management Facility, Grand Falls Bioremediation Facility). The site property is not serviced with electrical power, soil or sewage. The site is not located within a designated wellfield protection area or a designated watershed protection area. There are no water courses within 30 meters of the site. The nearest waterbody is a small stream (Street Brook) located approximately 150 meters from the closest point of the physical site, into which the effluent will be discharged as shown in Figure 3. Older mapping shows an intermittent stream flowing through the site; however, this stream was rerouted over 20 years ago; possibly because of the former agricultural use of the site. The rerouted stream currently flows to Street Brook north of the site, outside the 30-meter buffer. This rerouted stream is intermittent, drying up in dry periods. Based on the GeoNB Map layer, there are no regulated or provincially significant wetlands located within the vicinity of the site property. No trees will be cut down or soils disturbed if the site catchment area is expanded.

3.3 Socioeconomic Environment: The site property is not serviced with electrical power, soil or sewage. It is not located within an incorporated area. The site will be located within an open field immediately adjacent to the existing soil bioremediation facility (McLaughlin Soil Management Facility, Grand Falls Bioremediation Facility). The existing land uses bordering on the site PID are woodlands, agricultural fields and an existing, operating C&D site

4.0 SUMMARY OF ENVIRONMENTAL IMPACTS

4.1 Assessment of Environmental Impacts:

4.1.1 Waste: The proposed project involves increasing the catchment area for hydrocarbon contaminated soils treated at the site. The treated soil must meet provincial criteria prior to being used as cover material at the adjacent C&D site. The hydrocarbon contaminated soil will be transported to the site by trucks from sources in New Brunswick, Quebec, Nova Scotia, and Maine. Following treatment, the treated soil will pose no unacceptable human health or environmental risk.

4.1.2 Transportation: The hydrocarbon contaminated soil will be transported on existing highways and roads. As the potential sources of the hydrocarbon contaminated soil are not specifically known (future spill sites) it is not known what distances and from what locales the hydrocarbon contaminated soil would be transported. It is anticipated that, on average, such transportation would account for, at most, a few loads per day (<3/day). Such an increase in transportation trips through the local area would be incremental, having negligible environmental impact. As previously mentioned, it is anticipated that the overall haulage distance for the contaminated soil would be reduced, as remediation site managers will typically send materials to the closest disposal site, other factors being equal.

It should, due to shorter haul distances from spill sites, result in lower overall greenhouse gas emissions. The borders of north eastern Maine and south eastern Quebec are within a 100-km radius of the existing soil bioremediation facility. Currently, Maine hauls contaminated soils to Loudon, New Hampshire. From central Maine (Bangor) the Loudon site is a 670 km round trip, while the McLaughlin site is a 600 km round trip. If we assume that all contaminated soils north and east of Bangor come to the McLaughlin site, this would represent an approximately 400 km round trip. For the same region to ship to Loudon this represents an approximately 1,170 km round trip. Hauling from this area to the McLaughlin site represents a 770 km reduction in hauling distance per 30MT of contaminated soils. If we assume 2,500MT sourced from this area of north and eastern Maine and a transportation reduction of 770 km, this equals an overall reduction of

approximately 65,000 km in transportation. This will result in a reduction of approximately 48,750MT of carbon dioxide (GHF) emissions per year.

Eastern and southern Quebec currently haul contaminated soils to Montreal for disposal. If the southern and eastern portion of this area of Quebec (this side of Riviere du Loup) were to haul hydrocarbon contaminated soils to the McLaughlin facility in Grand Falls this would represent a transportation reduction of approximately 476 km reduction in hauling distance per 30MT of contaminated soils. If we assume 2,500MT sourced from this area of southern and eastern Quebec and a transportation reduction of 476 km, this equals an overall reduction of approximately 39,650 km in transportation. This will result in a reduction of approximately 29,700MT of carbon dioxide (GHF) emissions per year.

4.1.3 Disposal: McLaughlin Soil Management operates an existing Soil Bioremediation Facility on the site. This facility has an existing soil treatment lagoon for runoff from the impermeable pad underlying the Soil Bioremediation Facility. Water from this treatment lagoon is discharged through an oil water separator to an existing, engineered wetland swale. The discharge from the oil water separator and the groundwater adjacent to the engineered wetland are monitored to ensure compliance with the provincial Conditions of Approval for the Soil Bioremediation Facility. The engineered wetland subsequently discharges to Street Brook via a pipeline as shown in Figure 3.

4.2 Accidents, Malfunctions and Unplanned Events: McLaughlin Soil Management only becomes responsible for the contaminated soils when they are dumped at the treatment facility. As such, off site accidents malfunctions or unplanned events are the responsibility of the hauler. Onsite accidents malfunctions or unplanned events should be rare due to the type of operation that is proposed, i.e. bioremediation on an impermeable pad. Any upsets onsite will be dealt with as they arise. The associated companies of McLaughlin Soil Management Facility Ltd. and D&N Metals Company Ltd. have onsite equipment (excavators, dump trucks) capable of emergency response.

5.0 PUBLIC CONSULTATIONS

5.1 Proposed Public Consultation Process: The public consultations will be comprised of sending out an information letter to all property owners within a 500 meters radius of the proposed new soil treatment site (Figure 1) and accepting comments via mail, telephone and/or email. An information letter will also be sent to the local Member of the Provincial Legislature and local First Nations. The information letter will focus on the existing treatment process and will include a simple drawing showing general site plans. Any comments or questions received from the public will be compiled and submitted to NBDELG prior to as soon as possible. A copy of this registration document and any other associated documents will be available for public viewing at the D&N Metals Co. Ltd. office, located at 304 Kelly Road, Grand Falls, NB and at the District NB Environment and Local Government office in Grand Falls.

6.0 SIGNATURE

6.1 Signature:

For 

Danny McLaughlin, President
McLaughlin Soil Management Facility Ltd.

8-3-17
Date