Phase One Environmental Site Assessment of 13145 Lundy's Lane Allanburg, ON

Author: Robert Teodorini

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Prepared for: Renee Delaney, Small Scale Farms, Katie Altoft and Niagara College

Executive Summary

On February 10 and March 3, the property at 13145 Lundy's Lane in Allanburg, ON was assessed for any and all areas of potential environmental concern. The site is 19 acres in size, mainly used for agricultural purposes and is the home of Small Scale Farms, which is an agricultural start-up company that is building a sustainable food system to support the Niagara Region. It is surrounded by residential housing, farmland, local businesses, transmission station, railroad spur, an Enbridge natural gas gate station, and a sub-division that is under construction. The gate station and transmission station are heavily regulated by the provincial and federal governments and no articles or reports about them citing problems were found during the research for this report. Concerns discovered during the site reconnaissance and the research portion of the assessment were the railroad spur to the south, old, degrading tires on the eastern property line and a rusty oil drum on the property east of the site.

Creosote is a heavily regulated chemical that falls under the Pesticide Control Products Act through the Pest Management Regulatory Agency, according to the ECCC, and is typically used to make wooden railroad ties. Due to this, the railroad ties on that spur may or may not be made of wood, but if they are, the chemical seeps into the environment at a rate of 1% per year or so (Bolin, Smith, 2013). Once it's into the soil or water, it will be migrating and degrading at the same time. The various ingredients can take anywhere from a few weeks to a few months or longer to fully degrade (Bolin, Smith, 2013), but the migration rate is unknown. So, the spur should be checked to see if the ties are made of wood and, if they are, the soil needs to be tested to see how far the contamination has spread (Bolin, Smith, 2013).

Tires are made of natural rubber, synthetic rubber, plus a mixture of heavy metals and various other compounds (Root, 2019). During the degradation process, the heavy metals will make their way into the natural environment (Root, 2019). That means, based on where they are, they would contaminate the soil, which is clay (Root, 2019). Zinc, for example, can migrate at a rate of 0.03 to 0.31 cm yr^{-1} through clay, according to the *Heavy Metal Migration in Soils and Rocks at Historical Smelting Sites* report. So, the level of contamination is probably low, but it would depend on how long they have been there for. They should be properly disposed of as soon as possible to prevent the contamination from spreading and affecting the local wildlife.

Finally, there is an old drum that is couple feet away from the tires, appears to very rusty and should be disposed of immediately, but it's impossible to say if there's anything in it. If the land owner gives permission, the drum should be checked to see if there is anything inside. If there if is, the contents should be discarded safely right away and then remove the drum from the land, so it can be disposed of too.

Contents

1.0 – Introduction

1.1 – Background of Location

Based on aerial photography that is available, the plot of land at 13145 Lundy's Lane has been used for farming for at least a few decades and, in 2019, Ms. Renee Delaney began renting the property from the current owner of the land, Mr. Ed Hughes, and started Small Scale Farms (SSF), which is an agricultural start-up. SSF's purpose is to build a sustainable, local food system to support farmers and small businesses, while providing the people of Niagara with better access to fresh and healthy food that is produced in the region. The property is 19 acres in size with seven buildings and is primarily surrounded by farms with residential housing, as well as a HydroOne transmission station, CN railway spur, sub-division construction, an excavation company and an Enbridge gate station. There was some construction recently happening on the property and other changes are also currently being made or in the planning stages.

1.2 – Purpose

The goal of this environmental site assessment (ESA) is to determine what the areas of potential environmental concern are on the property and within the 250-meter perimeter of the property. Ms. Delaney also wants to use this report to show people how to do ESAs in the future.

1.3 – Scope of Work

This ESA was done in accordance with Z768-01, but very limited in scope due to the amount of records about the land that were provided and the buildings that could be accessed.

1.4 – Site Reconnaissance

On February 10, 2021, a visit to the property was made to have a look at what's happening on the land presently. It occurred between 12:00 pm – 1:40 pm. During the review of the area, the temperature was -7ºC while actually feeling like -9ºC, 74% cloud cover with 0.1 cm of snow falling, wind was blowing west by south west at 13 km/hour with gusts at 20 km/hour and the UV index was at one. The walkthrough of the property this day consisted of the entire property on the outside of the buildings, the inside of the main building and it took about 1.5 hours. Due to not having access to all the buildings that day, a second site visit was made on March 3rd, 2021, at 1:10 pm and lasted about an hour. On this second day, the temperature was 3 ºC, but felt like -2ºC. Cloud cover was 30% with 0% precipitation, 72% humidity, westerly winds blowing at 28 km/hour and a UV index of four. The inside of the 3 additional buildings still wasn't accessible, but with the warmer temperatures, a lot of the snow was melting, and the landscape was being changed a bit because of that.

1.5 – Limitations

As a result of Mr. Hughes not wanting to participate in this report, the inside of most of the buildings couldn't be accessed, title search and ERIS report documents were not provided, and some questions were not answered. The COVID-19 pandemic also made most of the questioning happen via the Internet.

2.0 – Records Review

2.1 – Water Well Record

This record for the well that is on site shows that the steel pipe for the well is six inches in diameter and goes 32 feet down. In addition to that, the soil that can be found from zero to 21 feet down is clay and 21 to 32 feet down is grey limestone. Also, the well was completed on June 9, 1970 and the recommended pump depth at the time was 31 feet deep.

2.2 – Amended Certificate of Approval for the Black Horse Gate Station

A letter from the Ontario Ministry of the Environment to Enbridge Gas Distribution Inc. giving the approval to build a distribution facility for natural gas at 13168 Lundy's Lane in Thorold, which is across the street from Small Scale Farms. The letter said they can have standby natural gas fired generator sets and natural gas fired boilers, but not how many of each. It also says the facility will have a limit of 1,189 million m^3/hour of natural gas passing through its pipeline system.

2.3 – Ruling from the Ontario Energy Board on an Application for a Natural Gas Pipeline

A letter from the Ontario Energy Board containing their decision on Enbridge's request to build a natural gas pipeline distribution system to deliver natural gas to Northland Power's Thorold Cogen facility at 90 Allanburg Rd in Thorold. It was approved and Appendix A in the document shows the preferred pipeline route. An existing pipeline from the Black Horse Gate Station was to connect with a new pipeline starting on Thorold Townline Road, go left at the intersection with Beaverdams Creek Road, take another right at Allanburg Road, and finally connect with the facility. That would put it all outside of the 250-meter perimeter, but the existing pipeline probably got more natural gas flowing through it because of this new pipeline construction, which means there would be a greater chance of a leak happening. No reported leaks or spills were found at the gate station at the time that this report was submitted though. The finalized route of the pipeline could also not be found.

2.4 – Public Information Session Notification about the Pipeline to Service Northland Power Plant

Enbridge Gas Distribution Inc. hired Stantec Consulting Ltd. to prepare an Environmental Report on the pipeline that would connect the gate station to the Thorold Cogen facility, according to this public notice. The report could not be found, however. The pipeline is also noted to be 12 inches in diameter and made of steel.

2.5 – Executive Summary of an Emission Summary and Dispersion Modelling Report by RWDI

This report assesses the air pollution emissions coming from the facility. It is required by law as per section 9 of the Environmental Protection Act to make sure that the facility is

in compliance. The report says that the facility was in compliance with the law and regulations. It was from July 2007.

2.6 - Executive Summary of an Emission Summary and Dispersion Modelling Report by Ortech Consulting Inc.

This report assesses the major updates that were made to the facility. It came back as being in compliance again. The report is from April 2020.

2.7 – Artist Concept of the Residential Site Plan for the Empire Calderwood Sub-Division

A site plan for the sub-division that is currently under construction across the street from Small Scale Farms. Roads, homes and businesses are planned for the area. Some are being built now.

2.8 – Amended Environmental Compliance Approval for the Allanburg Transmission Station

This letter from the Ontario Ministry of the Environment is an approval for the transmission station to construct a sewage system in order to collect, transport, treat, and dispose of storm water. The presence of six separate areas for different voltages, six transformer spill containment areas that are made of concrete, and an outdoor storage area for hydro poles is confirmed in the letter.

2.9 – Historical Aerial Photos of the Site

There are several aerial photos of the site ranging from 1934 to 2018.

2.10 – Agricultural Land Use Systems of the Regional Municipality of Niagara map

A map of Pelham, Thorold, Welland, and the surrounding land showing the agricultural uses of the area based on studies ranging from 1886 – 1986 by the Land Resources Research Institute. It was published by Agriculture Canada. This will be examined in section 4.2. As the map is quite large, the approximate property line was drawn onto the map and then circled in red.

2.11 – The Soils of the Regional Municipality of Niagara map

A map of Pelham, Thorold, Welland, and the surrounding land showing the different soil types throughout the area based on studies ranging from 1981 – 1985 by the Ontario Institute of Pedology. It was published by Agriculture Canada. This will be examined in section 4.2. As the map is quite large, the approximate property line was drawn onto the map and then circled in red.

2.12 – Topographical map of Site from the Province of Ontario

A topographical map of the site and surrounding area, which was made by the provincial government.

3.0 – Interviews

3.1 – Interview with Ed Hughes

An interview by email was conducted with Mr. Hughes. Information was obtained.

3.2 – Interview with Renee Delaney

An interview with Ms. Delaney was conducted in person and through Google Drive. Information was obtained.

3.3 – Interview with Leslie McCabe

An interview with Ms. McCabe was conducted in person and through Google Meets. Information was obtained.

3.4 – Interview with CN National Railway

Attempts were made to talk with a representative from CN National Railway as there is a spur of one of their railways that runs behind the property and some information on it would have helped, but they never responded as of the time that this report was submitted.

3.5 – Interview with Environment and Climate Change Canada

An interview with Julian Dafoe of Environment and Climate Change Canada (ECCC) was conducted over the phone. Information was obtained.

3.6 – Interview with Other

No other interviews were done.

4.0 – Site Reconnaissance

4.1 – Property Exterior

The site is long and mostly rectangular in shape with some hills and ditches throughout and they span across the entire width of the property. For a few weeks at the end of winter, when the ice and snow is melting, the ditches will partially flood and flow west. The six buildings that are on the property are the main building where all of the orders go through, a building that was recently under construction and appears to be mostly complete, two-storey residence, small shed containing the pesticides used on the property, two greenhouses, and a big barn. The only buildings that were allowed to be inspected were the main building, which will be discussed in section 4.2, and the greenhouses. Nothing of any real interest was in the greenhouses, but they did recently get some baby chickens that were 5 – 6 weeks old at the time and were being kept in one of the greenhouses during the day because it’s warm in there.

At the front of the property is a small parking lot for customers with three spaces, plus one for trucks and vans to drop off/pickup orders and supplies, a larger area in the back for the employees/volunteers, and an open field for crops, which borders the eastern

property line. The new building, residence, greenhouses and shed are also near the front. Beside the shed, there's an above ground storage tank (AST) that contains some kind of coloured fuel, which is probably for the tractor. It appears to be mostly in good condition, but the top is somewhat rusted. Across from the greenhouses is the irrigation setup. Small bags of salt for de-icing the parking lot and walkways are kept at the side of the main building along with a lot of empty, black milk cartons. At the rear, there are two barbecues, a stack of wooden pallets, and two large metal storage containers where they keep tools for the farm and an assortment of microgreens. Behind the storage containers, there was a top loading freezer, a propane tank, small container, blue plastic barrel, and two metal oil drums, which were said to be empty and would be cut up soon. During the second visit, only one drum was remaining.

Going past the back parking lot, that's where the garden is for SSF. To the east and south are more open field that are mainly used for farming, but power lines do run through the area here and there is a large transmission tower on the property. After the tower, was the SSF's apiary, then the first ditch, which was connected to a large drainage pipe where the water flows through to come onto the property. Past that was a large hill with more open fields on the east side and a big, red barn on the west side. To the left of the barn, there was a tractor and various items that appeared to be accessories for the tractor so that work could be accomplished on the farm, like spraying pesticides, among other tasks. On the right side of the barn, a large forklift type of vehicle was present.

On the eastern side, there is an open field for some crops to be planted, which is next to the property line on the eastern side and a row of old tires shows where that is. Tires are made of some natural rubber, synthetic rubber, plus a mixture of heavy metals and various other compounds (Root, 2019). When tires degrade, the heavy metals (cadmium, chromium, iron, lead, and zinc) (Shakya, Shrestha, Tamrakar & Bhattarai, 2006), as well as other compounds and solid ingredients, break down and leach into the surrounding environment, like soil (Rowe, 2002). Some of the heavy metals that are in tires can also be adsorbed to clay (McLean & Bledsoe, 1992), which is how they can migrate through the soil (Dube, Zbytniewski, Kowalkowski, Cukrowska, & Buszewski, 2000), but it happens at a very slow rate (Maskall, Whitehead, & Thornton, 1995). For example, according to the *Heavy Metal Migration in Soils and Rocks at Historical Smelting Sites* report, zinc migrates at a rate of 0.03 to 0.31 cm yr^{-1} through clay (Maskall, et. al, 1995), which is the main type of soil that Niagara has. Depending on how long the tires have been there for, a small portion of soil that is being used to grow crops could be contaminated with heavy metals, which means terrestrial insects, like worms, that live in that area may also be bioaccumulating heavy metals inside of them (Latifi, Musa & Musa, 2019), in addition to behaving differently (Mogren & Trumble, 2010). The bioaccumulation in the insects leads to biomagnification in larger species

that eat those insects (David, Matache, Tudorache, Chisamera, Rozylowicz & Radu, 2012) and that can cause adverse effects in those various animals and disrupt the local food chain (Shen, Chi & Xiong, 2018).

After the barn was another ditch where more water was to be flowing through during the second visit in greater volume and at a faster rate compared to the water in the first ditch. No drainage pipes were found though. Going further south, there was another hill with an apple orchard on it, which was surrounded by an electric fence with an opening at the front right corner and the power for it comes from a small solar panel. This is the section where the pesticides are used. The rear of the property can be reached by walking on the outside of that fence. There is one final ditch at the back filled with bullrushes, a metal grate that acts as a small bridge in the middle, and water flows down into it from the south. By crossing the bridge, the rear of the property has been reached. The land at the back did not seem to be getting used for much at the time, but there was a large pile of wood a few meters in and a second apiary by the eastern property line, which belongs to someone else who also rents a portion of the land from Mr. Hughes.

Changes are also being made to the property on a fairly regular basis at this time. For example, the backlot was paved, and more construction was done on the building that was worked on for 3 weeks near the beginning of the year.

4.2 – Interior of Main Building

The main building has 2 floors, a garage and is where all of their orders go through for packaging and distribution. A lot of items are stored in the garage, including a riding lawn mower, some gas cans and lots of bottles of apple cider. In the main work area, there was an oven, numerous refrigerators, and a top loading freezer. On the second floor, more random items were being stored there, like another refrigerator, televisions, and a lot of books.

4.3 – Geology and Agriculture

There are six soil codes that are on this property, according to the Soils of Pelham-Thorold-Welland map, which are ALU33/B=d, BVY1/B, BVY1/B=C, BVY1/B=c, BVY8/B=B, and TLD7/B>B. In Table 1, which is shown below, the codes will be listed and defined.

Table 1: Soil Codes and Their Definitions						
Map Unit Symbol	Parent Materials		Drainage		Topography code	Type of Slope(s)
	No. 1	No. 2	No. 1	No. 2		
ALU33	Various floodplain deposits	Mainly Lacustrine Silty Clay	Variable	Imperfect	B=d	50% Niagara soils smooth basin to level, 50% Thorold soils irregular gently sloping
BVY1	Mainly Lacustrine Silty Clay	N/A	Imperfect	N/A	B	100% Niagara soils smooth basin to level
BVY1	Mainly Lacustrine Silty Clay	N/A	Imperfect	N/A	B=C	50% Niagara soils smooth basin to level, 50% Thorold soils smooth very gently sloping
BVY1	Mainly Lacustrine Silty Clay	N/A	Imperfect	N/A	B=c	50% Niagara soils smooth basin to level, 50% Thorold soils irregular very gently sloping
BVY8	Mainly Lacustrine Silty Clay	Mainly Lacustrine Silty Clay	Imperfect	Poor	B=B	50% Niagara soils smooth basin to level, 50% Thorold soils smooth basin to level
TLD7	Mainly Lacustrine Silty Clay	Mainly Lacustrine Silty Clay	Poor	Imperfect	B>B	70% Niagara soils smooth basin to level, 30% Thorold soils smooth basin to level

The soil order profile is shown in Table 2 below. The most dominant type in this area are gleysolic soils. These types of soils are a product of the soil profile being saturated in water for a long time (Gleysolic, 2020). They are generally found in landscapes that are dominated by clay so the water moves through it at a very slow rate (Gleysolic,

2020). Luvisolic soils are the second most dominant type, which are found in abundance in forested areas that a loamy till underlies and comes from sedimentary rocks below or on deposits of clayey lacustrine (Luvisolic, 2020). The final type of soils are called brunisolic. Brunisolic soils are best described as a part of an evolutionary sequence (Brunisolic, 2020). It starts with parent material that is unweathered (regosolic soils) and finishes with developed forested soil that has reached maturity (luvisolic or podzolic soils) (Brunisolic, 2020). This process can take many millennia (Brunisolic, 2020).

Table 2: Soil Order Profile

Soil Order Code	56900131
Soil Type	Percentage (%)
Gleysolic	47
Luvisolic	40
Brunisolic	13
Chernozemic	0
Cryosolic	0
Organic	0
Podzolic	0
Regosolic	0
Solonetzic	0
Vertisolic	0

The agricultural map for this area shows that the agriculture uses for this property in 1966, when this map was published, was “urban related built-up” and “mixed” (Agricultural Land Use Systems of the Regional Municipality of Niagara, 1966). These are their respective definitions:

- “concentrations of residential, industrial, commercial, institutional and governmental buildings, including associated lawns, gardens, streets, parking lots, ponds and waste disposal areas”; and,
- “a combination of corn, hay, cereal grain(s) and pasture. Sod crops ≥20%. Medium intensity land use, primarily fulltime dairy enterprises. Mean farm size 115.1 ha; 84.0% cultivated, 29.8% rented. Prime land (CLI classes 1 & 2): owned land 73.1%, rented land 61.4%.”

(Agricultural Land Use Systems of the Regional Municipality of Niagara, 1966)

This seems to still be mostly true, but the crops that are being grown have mostly changed and there’s no livestock that are used to make dairy products in the area.

4.4 – Site Operations

Most of the site is used for farming purposes by at least three parties. Mr. Hughes grows the following species of apples:

- Porter;
- Kingston;
- Chisel;
- Yarlington Mill;
- Gold rush;
- Dabinett;
- Bulmers;
- Chevelle; and,
- Stokes.

In the portion of land that SSF rents, they grow various fruits and vegetables. For example, this year they plan to grow leeks, garlic, tomatoes, cucamelon, strawberries, raspberries, eggplant, peppers, zucchini, and multiple types of lettuces. Their orders are also packaged and distributed through the main building. They also take care of 20 chickens with plans to get more animals for the farm in the future. The third tenant grows tomatoes and peppers on the property. There’s also the two apiaries and a transmission tower runs power lines through the property.

4.5 – Wildlife

Some of the wildlife that live in or migrate through the area are coyotes, rabbits, deer, birds, squirrels, and a feral cat.

4.6 – Surrounding Locations

Within a 250-meter perimeter surrounding the property, there are 5 businesses or facilities that provide a service to the region. Starting with the property on the western side, it’s another farm with a big barn and a pond that a lot of the melted snow and ice

flows into. What they grow or farm is not known. On the west side of the site, there is a residence on a narrow piece of land, two motels with a large open field in the back (that appears to get farmed during the spring and summer, according to aerial photos), and a small forest. In the backyard of the residence, there's an oil drum that is covered in rust. It is unknown if there is anything inside the drum.

A portion of Lundy's Lane, which gets a fair amount of traffic during the day and night, is within the perimeter and runs right in front of SSF. During the winter, the road gets plowed, salted and/or sanded to remove ice and stop snow from getting adhered to the road (Winter Maintenance, n.d.). To determine what will actually be done, the City of Thorold monitors numerous factors including temperature, precipitation levels, and future forecasts (Winter Maintenance, n.d.). When salt is used on that roads or anywhere else, it dissolves quickly, leaving the chloride behind to get into the water runoff (Gould, 2013). From there, it can get into the soil or larger water bodies. If enough salt gets into the soil, it can become infertile (Provin & Pitt, n.d.) and kill vegetation (Gould, 2013). When the water flows into larger water bodies, like creeks, streams, rivers, and lakes, the chloride can become toxic to aquatic flora and fauna at low concentrations, but if it's high, it may be fatal (Gould, 2013). Dead zones can get created in ponds and lakes too (Gould, 2013). Also, a roundabout was built into the road in front of the motels last year.

Across the street, there is the V. Perri Excavating Inc. business, Enbridge Black Horse Gate Station, and an abandoned lot that has a shed on it, which may have been the former site of the excavation business. Enbridge now seems to be taking over ownership of this land now and expanding the gate station facility onto it. They have also installed pipelines in the area so that natural gas can be brought in and taken out of the facility (Zhu, Mao, Wang & Sun, 2013). Pipelines can have serious effects on the environment, but primarily only if they leak. As stated in Section 2.3, there's been no reported leaks from the pipelines in that area yet. East of that, there used to be an open field, but there is now a sub-division being built in the area and the contractor's supplies, like large, wooden trusses, are being stored near the road. There is also two other houses that are separate from the sub-division.

A spur of the CN National Railway runs behind the site. No official answer could be obtained from them as to how long it's been there for or how often it gets used, but during one of the site visits there was a train on it. Railroad ties that are made from wood get coated in creosote to preserve them and that allows the ties to last a lot longer than they would without the preservative (Bolin, Smith, 2013). The average life span of a railroad tie is 35 years (Bolin, Smith, 2013). During that time, the creosote can seep out into the environment at an approximate rate of 1% per year (Bolin, Smith, 2013). It. It can then take some parts of the chemical a few months to break down in the soil, whereas other parts would take years (Bolin, Smith, 2013). If groundwater gets

contaminated by creosote, that can make the breakdown process take even longer. The contamination would have adverse effects on aquatic life, but there is not enough data available to say what would happen to terrestrial wildlife (Melber, Kielhorn, Mangelsdorf, 2004). As creosote is heavily regulated by the federal government as a pesticide under the Pesticide Control Products Act through the Pest Management Regulatory Agency (PMRA), according to the ECCC, it is possible that the ties on this spur are made from something other than wood, like concrete or plastic.

On the southern side of the spur, the HydroOne Allanburg Transmission Station can be found. Polychlorinated biphenyls (PCBs) are obviously present there, but these facilities are subject to a fair amount of government oversight and so they do a good job at containing them. If any were to leak out though, their degradation rate in soil varies (Faroon, Keith, Smith-Simon, & De Rosa, 2003). Based on the descriptions and aerial images of the surrounding properties, there doesn't appear to be any above ground storage tanks (ASTs), but there could be underground storage tanks (USTs). Along the southern and western sides, there are several transmission stations and a lot of power lines. There is no viable connection between living within a close proximity to power lines, transmission stations, and poor human health (Zeman, n.d.), but there are proven negative effects on wildlife and the overall environment (Effects of the Physical Presence of Transmission Lines, n.d.).

5.0 – Findings

The site does not appear have any serious problems. Road salt is used on the parking lot and on the roads, which does affect the environment, but ice and snow does need to be dealt with during the winter. Otherwise, it can cause accidents and the 3 main ways of handling it (road salt, beet juice, and sand) have negative effects on the environment that are all equally as bad (Plant-based 'road salt' good for highways but not for insects, 2021; Kelleher & Cornwall, 2008). Power lines and transmission towers also negatively affect the environment (Effects of the Physical Presence of Transmission Lines, n.d.).

As our technology advances and move toward renewable energy, hopefully those effects can be mitigated more than they currently are. The possibility of creosote contamination at the south of the property is somewhat concerning and worth investigating to see if the ties are made from wood and, if they are, whether or not the contamination has actually reached the property line. The rusty oil drum on the property that is to the east of the site should also be checked on and the old tires that show where the property line is between the two properties could be contaminating the ground (Rowe, 2002), as well as any wildlife in the area (David, Matache, Tudorache, Chisamera, Rozylowicz & Radu, 2012; Shen, Chi & Xiong, 2018).

6.0 – Conclusion

Upon reviewing the site and going over all documents that were available, it is recommended that the railroad spur south of the site be inspected to see if the ties are wood. If they are, the soil south of the property should be tested for contamination from creosote to see how far and deep it goes. The oil drum on the property to the east of the site should be investigated to see if there's anything in it, pending permission from the land owner. If the drum is empty, it should be properly disposed of, but if there is anything inside, that should be safely discarded first. Finally, the tires that show where the property line is on the eastern side of the property should be removed as soon as possible.

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8.0 – Appendix

8.1 – Site Reconnaissance Photos

Figure 1: The residence at 13145 Lundy's Lane

Figure 2: Building that is under construction.

Figure 3: Rear of the building under construction

Figure 4: Main building of Small Scale Farms

Figure 5: Main work area in the building

Figure 6: Garage in the building where the lawnmower is kept with several gas cans

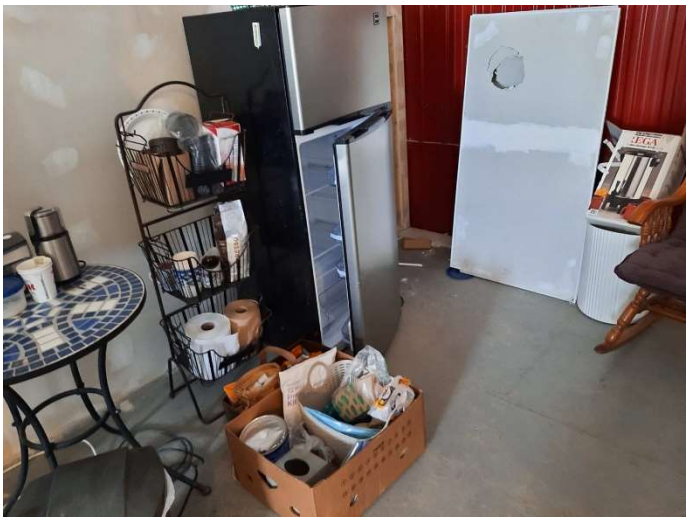


Figure 7: Upstairs of main building

Figure 8: Storage area upstairs

Figure 9: Lumber kept near road for sub-division construction

Figure 10: Sub-divison under construction

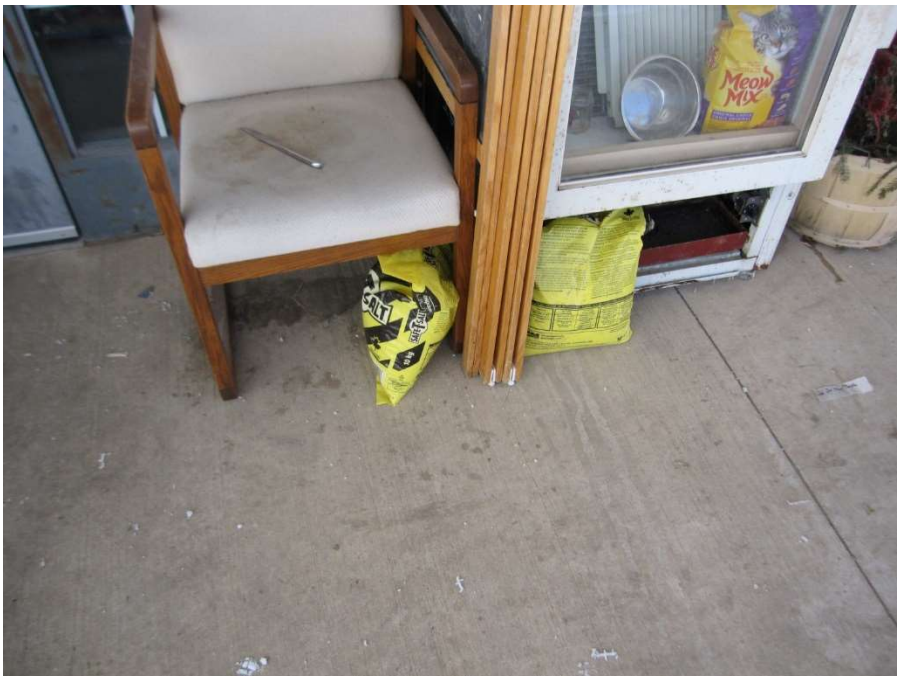


Figure 11: De-icing salt used in the winter

Figure 12: Storage containers in the back

Figure 13: Feral cat that lives in the area.

Figure 14: Empty oil drums at the back of the storage containers

Figure 15: Top loading freezer

Figure 16: Propane tank

Figure 17: Multiple images of the AST, bottom image focuses on the rust

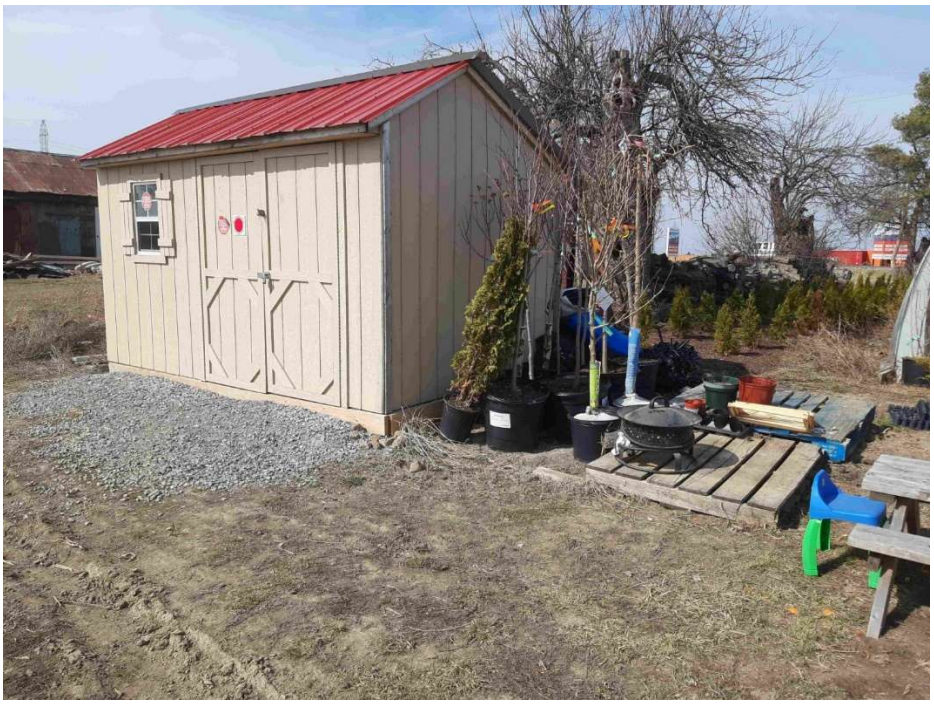


Figure 18: Shack where pesticides are contained on site

Figure 19: SSF Greenhouses

Figure 20: 20 baby chickens hiding within the plants

Figure 21: Main irrigation access point

Figure 22: Old tires on the eastern property line

Figure 23: Rusty oil drum on the property to the east of the site

Figure 24: Transmission tower that runs the power lines through the site

Figure 25: Multiple images of the on-site compost heap

Figure 2: SSF apiary

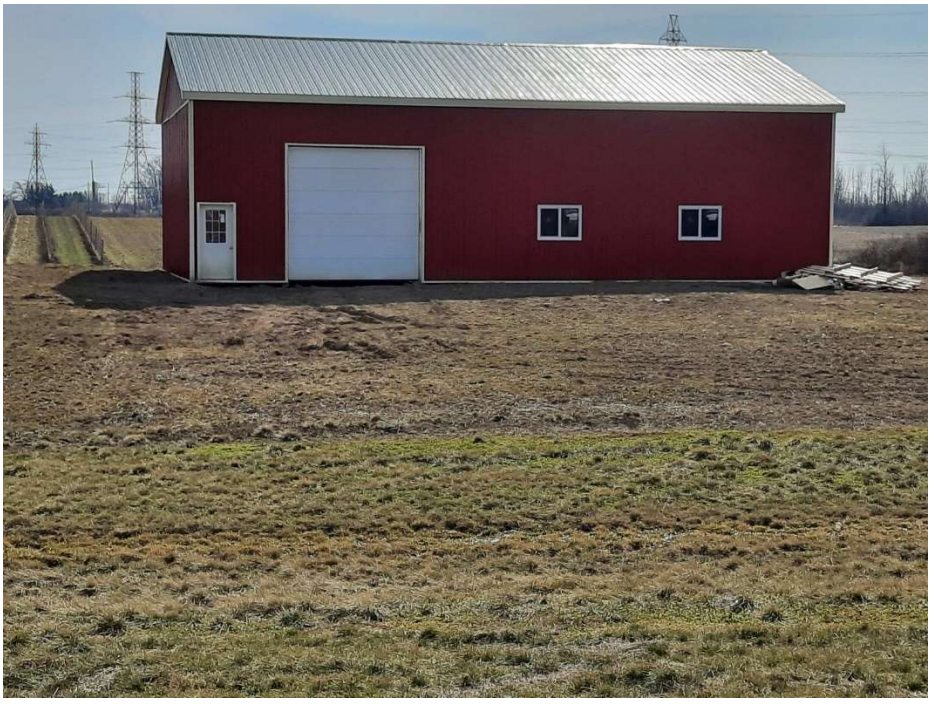


Figure 36: New barn on the property

Figure 27: Eastern side of first flooded section and culvert

Figure 28: Western side of first flooded section

Figure 29: Western side of second flooded section

Figure 30: Eastern side of second flooded section

Figure 34: Train passing behind the property on the CN railway spur

Figure 5: More flooding from ice melt at the back of the property

Figure 33: Wood pile at the back of the property

Figure 34: Second apiary at the back of the property

8.2 – Well Water Record

The water well record from when the well was originally made.

The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11 | 6602520 | MUNICIP. 66006 | CON.

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
Welland	Thorold	20 hwy	115

[redacted] LANDURG Post Office. DATE COMPLETED: DAY 09 MO. JUNE YR. 70

70980 | RC 4 | ELEVATION 580 | RC 4 | BASIN CODE EH

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	TO
Brown	Clay	—	Packed	0.	21
Grey	Limestone	—	Layered	21.	326'

31 | 0021605 | 0032215T

32

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0025	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	TO
06 (6")	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	3/16	0.	0022 (~~22'~~)
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE		22.5'	0032 (~~326'~~)
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.) | DIAMETER INCHES | LENGTH FEET

MATERIAL AND TYPE | DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER | PUMPING RATE: 0005 GPM | DURATION OF PUMPING: 02 HOURS 00 MINS.

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
022 FEET	025 FEET	022 FEET	022 FEET	022 FEET	022 FEET

WATER LEVELS DURING: 1 ☐ PUMPING 2 ☒ RECOVERY

IF FLOWING, GIVE RATE: GPM | PUMP INTAKE SET AT: FEET | WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING: 031 FEET | RECOMMENDED PUMPING RATE: 0004 GPM

001.7 GPM/FT. SPECIFIC CAPACITY

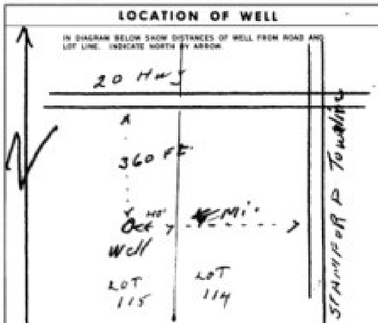
FINAL STATUS OF WELL: 1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE 02: 1 ☐ DOMESTIC 2 ☒ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING: 1 ☒ CABLE TOOL 2 ☐ ROTARY (CONVENTIONAL) 3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION 6 ☐ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS:

CONTRACTOR

NAME OF WELL CONTRACTOR: Frank Merritt | LICENCE NUMBER: 3608

ADDRESS: RR #1 Smithville, Ontario

NAME OF DRILLER OR BORER: Frank Merritt | LICENCE NUMBER: 3608

SIGNATURE OF CONTRACTOR: Frank Merritt | SUBMISSION DATE: DAY 9 MO. June YR. 70

OFFICE USE ONLY

DATA SOURCE: 1 | CONTRACTOR: 3608 | DATE RECEIVED: 190670

DATE OF INSPECTION: 24, 9, 71 | INSPECTOR

REMARKS: CSS.S8

OWRC COPY

8.3 – Pipeline Construction Request

A request to build a natural gas pipeline that would connect to another building in Thorold.

Ontario Energy Board

Commission de l'énergie de l'Ontario

Ontario

EB-2008-0065

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B;

AND IN THE MATTER OF an application by Enbridge Gas Distribution Inc. for an Order pursuant to Section 90(1) of the Ontario Energy Board Act, 1998, granting leave to construct a natural gas distribution pipeline and related facilities in the City of Thorold in the Regional Municipality of Niagara.

BEFORE: Paul Vlahos
Presiding Member

Paul Sommerville
Member

DECISION AND ORDER

Enbridge Gas Distribution Inc. ("Enbridge" or "EDG") has filed an application with the Board, dated June 27, 2008, under section 90(1) of the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B, for orders granting leave to construct approximately 2.9 km of Nominal Pipe Size ("NPS") 12 diameter steel high pressure pipeline and a gate station (meter and pressure regulator) in the City of Thorold, in the Regional Municipality of Niagara. The pipeline and related facilities are intended to serve the requirements of natural gas demand for a gas-fired generator currently under construction.

For the reasons set out below, the Board finds that the construction of the proposed pipeline is in the public interest and grants Leave to Construct, subject to certain Conditions of Approval, which are attached to this Decision.

The Proposed Pipeline

The 2.9 km pipeline will be a dedicated line providing natural gas to a 265 MW cogeneration plant proposed by Northland Power Inc., Thorold Cogen L.P. ("Thorold Cogen facility"), in Thorold being constructed at the Abitibi Plant where both heat and electricity will be produced.

A map showing the location of the proposed pipeline and ancillary facility is attached as Appendix A. The proposed pipeline will originate at the TransCanada Pipeline ("TCPL") where it crosses Thorold Townline Road. At that location, Enbridge proposes to construct a gate station to reduce the TCPL line pressure to less than 4500 kPa (653 psi) and to measure the gas volumes to the Thorold Cogen station. Enbridge's proposed line will proceed north along the road allowance of Thorold Townline Road from the intersection with TCPL for approximately 0.6 km to Beaversdams Road. The pipeline will then proceed west along Beaversdams Road for 0.8 km to Davis Road (Highway 58) and Niagara Falls Road. The pipeline will follow Niagara Falls Road west for approximately 1.2 km to Allanburg Road where it will proceed north on Allanburg Road for 0.2 km to the route end point located at the proposed Thorold Cogen facility.

The Proceeding

The Board issued the Notice of Application on August 1, 2008, which was published and served by EGD as directed. Intervenor requests were received from Walker Community Development Corporation, Thorold Cogen L.P. and Hydro One Networks Inc. All requests for intervention were approved. No observer or letters of comment were filed. The Board proceeded by way of a written hearing. No interrogatories or submissions were filed by the intervenors

On September 4, 2008, Board Staff, through written interrogatories, requested clarification of certain aspects of the pre-filed evidence and additional information. On

September 23, 2008, EGD responded to the interrogatories, which concluded the discovery phase of the proceeding.
This is an application under section 90 of the Act, seeking a Leave to Construct Order. Section 96 of the Act provides that the Board shall make an Order granting leave if the Board finds that "the construction, expansion or reinforcement of the proposed work is in the public interest". When determining whether a project is in the public interest, the Board typically examines the need for the project, the economics of the project, the environmental impact, the impact on landowners and consultation with Aboriginal Peoples. Each of these factors will be considered in turn.

The Need for the Project

The proposed pipeline and related facilities are intended to deliver gas to the proposed Thorold Cogen facility.

The Thorold Cogen facility is a 265 MW combined heat and power ("CHP") facility that is natural-gas fired. The waste heat from the turbine will be used to produce steam, some of which will be piped over to and consumed by the Abitibi-Consolidated paper mill that is located on the same property. Thorold Cogen has entered into a 20-year agreement with the Ontario Power Authority ("OPA") to supply electricity to the province. This agreement was the result of an OPA-administered competitive Request for Proposal ("RFP") process as per an Ontario Ministry of Energy directive. The directive was in response to critical needs for new clean, efficient and reliable electricity supply in the province. Thorold Cogen was selected to develop a CHP facility through the RFP process.

EGD states, and the Board accepts, that the timely development of the facilities required to deliver natural gas to the Thorold Cogen facility is critical to achieving these reliability and efficiency objectives. Gas will be required for commissioning during the third quarter of 2009 to prepare for commercial operation in the first quarter of 2010.

The Proposed Pipeline's Design

According to EGD's evidence, the design and pipe specifications, installation and testing of the proposed pipeline adhere to the requirements of Ontario Regulation 210/01 under the *Technical Standards and Safety Act*, Oil and Gas Pipeline Systems and the CSA Z662-03 Oil and Gas Pipeline Systems code.

The Board is satisfied that the evidence establishes that the pipeline design and specifications are acceptable.

Environmental Assessment and Routing

EGD retained Stantec Consulting Limited ("Stantec") to undertake an environmental assessment, evaluate alternatives and advise on the selection of a preferred route. The environmental assessment was carried out in accordance with the Board's "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (May 2003)" (the "Board's Environmental Guidelines"). The results of the assessment are documented in the report entitled "Environmental Report: Pipeline to serve the proposed Thorold Cogen L.P." dated April, 2008 (the "Stantec Report"), which was filed in this proceeding.

As part of the environmental assessment process, Stantec undertook consultation with government agencies and the public. Public meetings were held on May 16, 2007, June 26, 2007 and March 18, 2008 to inform the public of the project and to solicit input. The Stantec Report included details of the public consultation undertaken. No major concerns were identified.

In accordance with the Board's Environmental Guidelines, the Stantec Report was reviewed by the Ontario Pipeline Coordination Committee ("OPCC"). There are no outstanding concerns related to the OPCC review.

Stantec assessed and rated five route alternatives using routing criteria and consideration of proposed mitigation measures. The Stantec Report concluded that the preferred route selected is the shortest in length and has the least potential for encountering archaeological resources. The Report states that the mitigating

measures proposed comply with accepted industry practice and EGD's construction manual, and that the net residual environmental effects do not constitute a significant environmental effect.

EGD confirms that all permits and approvals will be secured prior to the construction of the pipeline.

The Board accepts EGD's evidence regarding the environmental assessment of the proposed pipeline, and finds that the proposed mitigation and monitoring activities are acceptable and address the environmental concerns. The Board also accepts that the proposed project is the best alternative.

Economics of the Project

The total estimated cost for the Thorold Cogen Pipeline project is $6,397,224. The economic feasibility of the project was measured in accordance with the Board's approved procedures as established in EBO 188[1]. The feasibility analysis for the project was based upon a 20-year customer revenue horizon and has been prepared based on EGD's feasibility guidelines pursuant to the Board's Decision with Reasons in EGD's EB-2006-0034 rate application. This analysis indicated that the proposed facilities have a Net Present Value ("NPV") of $0 and a Profitability Index ("PI") of 1.00. A PI at or above 1.0 indicates that the project is economic for EGD. Enbridge's Rate-125 will recover the revenue requirement through monthly demand charges.

The Board accepts EGD's evidence and finds that the project is economically feasible under the proposed feasibility analysis.

Land Issues and Form of Easement

Section 97 of the Act provides that a leave to construct will not be granted until the applicant has satisfied the Board that it has offered or will offer to each owner of land

[1] [The Consumers Gas Company Ltd, Union Gas Limited and Centra Gas Ontario Inc., Natural Gas System Expansion, Report of the Board, EBO 188, (January 30, 1998)]

affected by the approved route or location an agreement in a form approved by the Board.

EGD has indicated that the proposed pipeline is to be located entirely within existing road allowances. As such, EGD does not anticipate the need to obtain either temporary or permanent land rights. However, EGD has filed with the Board a form of easement agreement that it will offer to landowners in the event that requirement for easements change.

EGD notes that two acres of property are required for the Gate Station facilities. There are three potential locations identified for the Gate Station. Negotiations are continuing with the landowners to finalize the site for the Gate Station.

The Board approves the form of easement which has been filed by EGD.

Aboriginal Consultation Conducted by Enbridge

EGD, through the Stantec Report, advised that there were no known First Nation reserves or lands that are currently used along the proposed pipeline route for traditional or cultural purposes.

Stantec initiated consultation with the Indian and Northern Affairs Canada ("INAC") to ensure the status of lands within the Study area did not contain First Nation reserves or lands. A response from INAC's Specific Claims Branch was received on July 19, 2007, indicating that there are no land claims in the Study Area that INAC is aware of.

The Board is satisfied that EGD has conducted a proper search and that no Aboriginal groups will be adversely affected by the proposed project.

Orders Granted

For the reasons indicated, the Board finds the pipeline project proposed by EGD in this proceeding is in the public interest and grants an Order for Leave to Construct subject to the Conditions of Approval as set out in Appendix B.

THE BOARD ORDERS THAT:

1. Enbridge Gas Distribution Inc. is granted leave, pursuant to subsection 90 (1) of the Act, to construct approximately 2.9 kilometres of NPS 12 in the City of Thorold, the Regional Municipality of Niagara for the purpose of supplying natural gas to the Thorold Cogen L.P. facility, subject to the Conditions of Approval set forth in Appendix B.

2. Enbridge Gas Distribution Inc. shall pay the Board's costs incidental to this proceeding upon receipt of the Board's invoice.

DATED at Toronto October 28, 2008

ONTARIO ENERGY BOARD

Original signed by

Kirsten Walli
Board Secretary

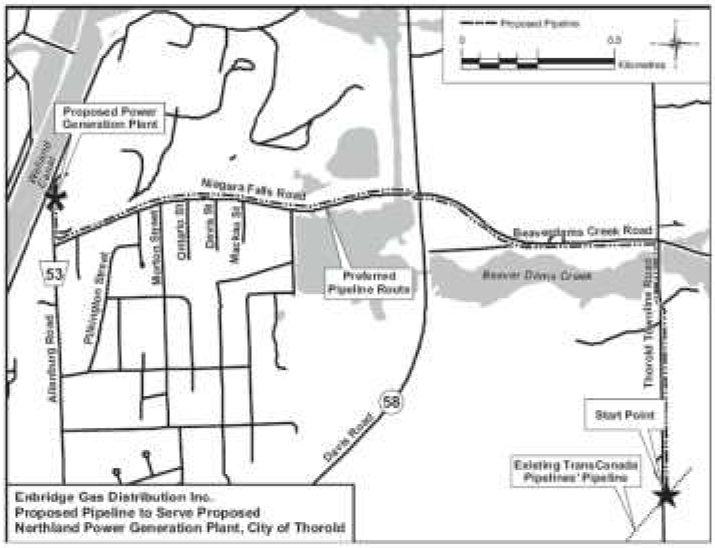
APPENDIX A

TO BOARD DECISION AND ORDER

IN THE MATTER OF EB-2008-0065

DATED October 28, 2008

MAP OF THE PIPELINE ROUTE


Proposed Pipeline
0
0.5
Kilometres
Proposed Power
Generation Plant
Niagara Falls Road
Beaverdams Creek Road
Beaver Dams Creek
Preferred
Pipeline Route
Allanburg Road
53
Pilkington Street
Marlton Street
Ontario St
Davis St
Mackay St
58
Davis Road
Start Point
Existing TransCanada
Pipelines' Pipeline
Enbridge Gas Distribution Inc.
Proposed Pipeline to Serve Proposed
Northland Power Generation Plant, City of Thorold

APPENDIX B

TO BOARD DECISION AND ORDER

IN THE MATTER OF EB-2008-0065

DATED October 28, 2008

CONDITIONS OF APPROVAL

Conditions of Approval

Leave to Construct

1 General Requirements

1.1 Enbridge Gas Distribution Inc. ("Enbridge") shall construct the facilities and restore the land in accordance with its application and the evidence filed in EB-2008-0065, except as modified by this Order and these Conditions of Approval.

1.2 Unless otherwise ordered by the Board, authorization for Leave to Construct shall terminate December 31, 2009, unless construction has commenced prior to then.

1.3 Except as modified by this Order, Enbridge shall implement all the recommendations of the Environmental Report filed in the pre-filed evidence, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee ("OPCC") review.

1.4 Enbridge shall advise the Board's designated representative of any proposed material change in construction or restoration procedures and, except in an emergency, Enbridge shall not make such change without prior approval of the Board or its designated representative. In the event of an emergency, the Board shall be informed immediately after the fact.

2 Project and Communications Requirements

2.1 The Board's designated representative for the purpose of these Conditions of Approval shall be the Manager, Facilities Applications.

2.2 Enbridge shall designate a person as project engineer and shall provide the name of the individual to the Board's designated representative. The project engineer will be responsible for the fulfilment of the Conditions of Approval on the construction site. Enbridge shall provide a copy of the Order and Conditions of Approval to the project engineer, within seven days of the Board's Order being issued.

2.3 Enbridge shall give the Board's designated representative and the Chair of the OPCC ten days written notice in advance of the commencement of the construction.

2.4 Enbridge shall furnish the Board's designated representative with all reasonable assistance for ascertaining whether the work is being or has been performed in accordance with the Board's Order.

2.5 Enbridge shall file with the Board's designated representative notice of the date on which the installed pipelines were tested, within one month after the final test date.

2.6 Enbridge shall furnish the Board's designated representative with five copies of written confirmation of the completion of construction. A copy of the confirmation shall be provided to the Chair of the OPCC.

3 Monitoring and Reporting Requirements

3.1 Both during and after construction, Enbridge shall monitor the impacts of construction, and shall file four copies of both an interim and a final monitoring report with the Board. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within fifteen months of the in-service date. Enbridge shall attach a log of all complaints that have been received to the interim and final monitoring reports. The log shall record the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying such actions.

3.2 The interim monitoring report shall confirm Enbridge's adherence to Condition 1.1 and shall include a description of the impacts noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction.

3.3 The final monitoring report shall describe the condition of any rehabilitated land and the effectiveness of any mitigation measures undertaken. The results of the monitoring programs and analysis shall be included and recommendations made as appropriate. Any deficiency in compliance with any of the Conditions of Approval shall be explained.

4 Easement Agreements

4.1 Enbridge shall offer the form of agreement approved by the Board to each landowner, as may be required, along the route of the proposed work.

5 Other Approvals and Agreements

5.1 Enbridge shall obtain all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project, shall provide a list thereof, and shall provide copies of all such written approvals, permits, licences, and certificates upon the Board's request.

5.2 Enbridge shall not, without prior approval of the Board, consent to any alteration or amendment to the Gas Delivery Agreement dated and executed on August 15, 2007, where such alteration or amendment has or may have any material impact on Enbridge's ratepayers.

5.3 Enbridge shall file with the Board, a copy of Thorold Cogen L.P.'s irrevocable bank letter of credit to Enbridge for an amount not less than cost estimate of the applied-for facilities; this filing shall take place no later than 14 days after the start of construction.

8.4 – Public Meeting Notice

A notification of a public meeting that happened in 2007 with Enbridge and Stantec about the pipeline.

Appendix B5

Public Information Session Notifications
and Newsletters

Stantec Consulting Ltd.
361 Southgate Drive
Guelph ON N1G 3M5
Tel: (519) 836-6050 Fax: (519) 836-2493
stantec.com

Stantec

May 7, 2007

Dear Resident:

Reference: Enbridge Gas Distribution Inc. – Pipeline to Service Northland Power Plant

Stantec Consulting Ltd. ("Stantec") has been retained by Enbridge Gas Distribution Inc. ("Enbridge") to prepare an Environmental Report (ER) for a proposed pipeline project to provide natural gas to the Northland Power Plant to be located at the site of Abitibi Consolidated Inc. The proposed project involves the construction of a natural gas pipeline to originate from the TransCanada Pipelines natural gas transmission corridor (Lundy's Lane at Blackhorse Gate Station or Townline Road) in Thorold South to the Northland Power Plant located on Niagara Falls Road in Thorold South.

Stantec's ER will accompany Enbridge's Leave-To-Construct application to the Ontario Energy Board expected in the summer of 2007. The Ontario Energy Board is the body that regulates the energy sector in the province and whose review and approval is required before this project can proceed.

To learn more about the project and to provide input to the planning process, we invite you to attend an upcoming Public Information Session hosted by Stantec. Input received at the Public Information Session will be used to help develop or confirm route selection, and site-specific protection and mitigation measures. Representatives from Enbridge will also be available at the Public Information Session to answer your questions.

Details regarding the Public Information Session are as follows:

Fire Station Two – Thorold South
701 Allanburg Rd
Thorold, Ontario
May 16, 2007
6:00 pm to 9:00 pm

We hope that you will attend the Public Information Session. If you or a representative are not able to join us, as always, we welcome your call (519) 836-6050.

Sincerely,

STANTEC CONSULTING LTD.

David Wesenger
Senior Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
david.wesenger@stantec.com

Attachment: Notice of Public Information Session

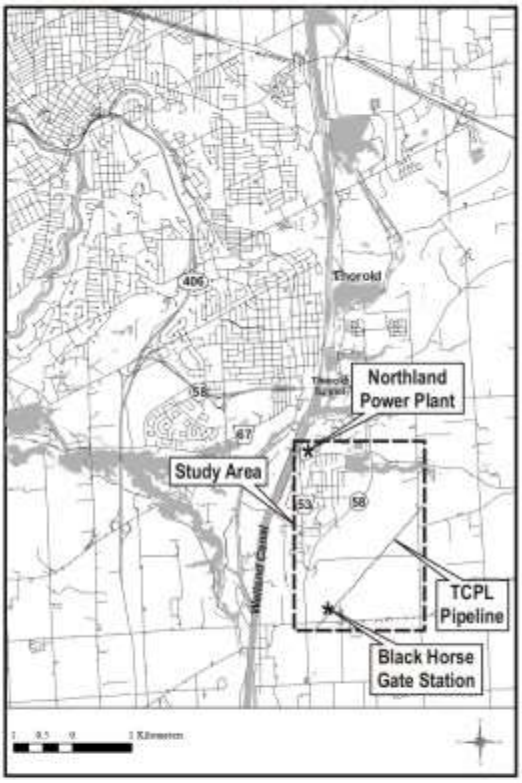
NOTICE OF PUBLIC INFORMATION SESSION

Northlands Pipeline Project

Enbridge Gas Distribution Inc. ("Enbridge") provides safe, reliable delivery of environmentally preferred natural gas to approximately 1.8 million residential, commercial, and industrial customers across Ontario. Enbridge is committed to environmental stewardship and conducts all of its operations in an environmentally responsible manner. As such, Enbridge is proposing to construct a natural gas pipeline to meet the demand for natural gas at the Northlands Cogeneration Power Plant, a Gas-Fired Cogeneration Station in Thorold, Ontario.

The proposed project includes constructing a Nominal Pipe Size (NPS) 12 (12-inch/305 mm) diameter steel pipeline. The proposed pipeline begins along the TransCanada Pipelines (TCPL) transmission pipeline in Thorold, Ontario and ends at the Northlands Cogeneration Power Plant to be located on the property of Abitibi Paper Products.

To assist with the environmental and planning aspects of this project, Enbridge has retained Stantec Consulting Ltd. ("Stantec") to prepare an Environmental Report ("ER"). The ER is being completed as required under the Ontario Energy Board's "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (May 2003)."



Enbridge is hosting a Public Information Session to provide you with an opportunity to review the project and provide input to the planning process. A Public Information Session regarding the proposed project is scheduled:

When: May 16, 2007
Time: 6:00 pm - 9:00 pm
Where: Fire Station Two - Thorold South
701 Allanburg Rd
Thorold, Ontario, L2V 1B1

At this Public Information Session, representatives from Stantec and Enbridge will be available to explain the project and answer questions regarding the route selection process, construction procedures, and specific mitigation measures.

Input received from the Public Information Session will be used to determine the Preferred Route alignment and help develop site-specific protection and mitigation measures. Anyone having interest in this study is encouraged to contact Stantec at david.wesenger@stantec.com or call collect to (519) 836-6050. Written comments can also be mailed to:

David Wesenger
Senior Project Manager
Stantec Consulting Ltd.
361 Southgate Drive
Guelph, Ontario
N1G 3M5

Edwin Makkinga, B.Sc., CCEP
Environmental, Health & Safety Specialist
Enbridge Gas Distribution Inc.
500 Consumers Road
North York, Ontario
M2J 1P8

Enbridge will make additional information about the Northlands Pipeline Project available as the project progresses. At this time, it is intended that information will be distributed through local newspapers.

Information will be collected and used in accordance with the Freedom of Information and Protection of Privacy Act, and solely for the purpose of assisting Enbridge in meeting environmental assessment and local planning requirements. This material will be maintained on file for use during the study and may be included in project documentation. With the exception of personal information all comments will become part of the public record.

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Pipeline to Service Northland Power Plant

An Enbridge Gas Distribution Inc. Pipeline Project

Information Newsletter May 16th, 2007.

THE PROJECT

Enbridge Gas Distribution Inc. ("Enbridge") is proposing to provide natural gas pipeline to serve the Northland Power Plant, to be located at the site of Abitibi Consolidated Inc. The proposed project involves the construction of a natural gas pipeline to originate from the TransCanada Pipelines natural gas transmission corridor (Townline Road) to the Northland Power Plant located on Niagara Falls Road in the (Township of Thorold South, County of Niagara).

The proposed project involves the construction of a 12-inch (305 millimetre) steel natural gas pipeline. The take off point is either at TransCanada Pipeline's corridor at Townline Road or at Enbridge's Black Horse Gate Station on Lundy's Lane where it runs north. The termination point is at the site of Abitibi Consolidated Inc. and the future location of Northland Power's Cogeneration Plant.

Enbridge Gas Distribution Inc., provides safe, reliable delivery of environmentally preferred natural gas to approximately 1.8 million residential, commercial, and industrial customers across Ontario. Enbridge is committed to environmental stewardship and conducts all of its operations in an environmentally responsible manner.

ALTERNATIVE ROUTES AND CORRIDORS

PUBLIC INFORMATION SESSION

This Public Information Session aims to provide interested and potentially affected parties with an opportunity to review and comment on the proposed Enbridge pipeline project. Input received at this Public Information Session will be used by Stantec Consulting Ltd. ("Stantec"), an independent environmental consultant, to develop or confirm route selection, and site-specific protection and mitigation measures, which will be detailed in an Environmental Report (ER). Stantec's ER will be part of the Leave-to-construct application by Enbridge to the Ontario Energy Board (OEB) expected in Spring 2007. The OEB is the body responsible for reviewing and approving all pipeline projects.

Pipeline to Service Northland Power Plant
An Enbridge Gas Distribution Inc. Pipeline Project

Information Newsletter May 16th, 2007.

LET US KNOW WHAT YOU'RE THINKING

We are interested in hearing your comments, addressing questions, and working with the communities and residents along the preferred route to ensure the smooth and orderly development of the project.

Our ongoing approach to public communications and consultation includes a mix of providing information on the project plans and receiving input from interested people through the Public Information Session, exit questionnaires provided at the Public Information Session, and newsletters. Meetings with individual property-owners or groups who may be directly affected by the proposed project can be arranged to discuss project details and concerns.

At the Public Information Session, we particularly want your input on a prefered route, the study process, and any other interests you might have regarding this project. You may provide comments at any point in the ER process.

WHAT HAPPENS AFTER THE PUBLIC INFORMATION SESSION?

After the Public Information Session, Stantec will evaluate the exit questionnaire results and other input and use this information to determine a preliminary preferred route. It is Enbridge's hope that meetings with directly affected landowners can be scheduled to obtain information about individual property concerns related to the project.

The ER (to be completed in June 2007) will outline the plans to reduce and control effects of the pipeline on the environment, identify plans to monitor the project, and any other contingencies.

WHAT'S NEXT?

- Analysis of public input (May 2007)
- Identification of preferred route (June 2007)
- ER report completion (June 2007)
- Application to OEB (Summer 2007)
- Ongoing public consultation (Summer 2007)
- Land agent contact with directly affected landowners (Summer 2007)
- OEB hearing (Fall 2007)
- Construction subject to OEB approval (2008)
- Pipeline operation and maintenance (2008-onwards)

CONTACT THE PROJECT TEAM

For general inquiries contact:
Edwin Makkinga
Enbridge Gas Distribution Inc.
500 Consumers Road, 5th Floor
North York, Ontario M2J 1P8
Ph: 416-495-6789
Fax: 416-495-5523
Email: edwin.makkinga@enbridge.com

David Wesenger
Stantec Consulting Ltd.
361 Southgate Drive
Guelph, Ontario N1G 3M5
Ph: 519-836-6050 (call collect)
Fax: 519-836-2493
Email: david.wesenger@stantec.com

Stantec Consulting Ltd.
361 Southgate Drive
Guelph ON N1G 3M5
Tel: (519) 836-6050
Fax: (519) 836-2493

June 12, 2007
File: 160960284

«First»«Last», «Position»
«Agency»
«Address»
«City» «Prov» «Postal»

Dear «Title» «Last»:

Reference: Notice of Second Public Information Session: Enbridge Gas Distribution Inc. – Natural Gas Pipeline to Serve the Northland Power Plant

In response to the Government of Ontario's request for new clean energy sources, Enbridge Gas Distribution Inc. ("Enbridge") is currently working on preliminary plans for a natural gas pipeline to serve the Northland Cogeneration Power Plant to be located on the property of Abitibi Paper Products. The project will require the construction of a new natural gas pipeline that would travel northwest from the point where TransCanada PipeLine's existing pipeline crosses Townline Road in Thorold, Ontario, and will predominantly follow existing right-of-ways (ROW).

Since our last correspondence on April 25, 2007 the Preliminary Preferred Route has been selected. This route is shown in the enclosed figure.

An independent consultant, Stantec Consulting Ltd. ("Stantec"), is conducting the Environmental Report (ER) for this project. Stantec's role will be to collect baseline natural environment and socio-economic data, and to prepare a report that will accompany Enbridge's application to the Ontario Energy Board expected in the summer of 2007. The Ontario Energy Board is the body that regulates the energy sector in the province and whose review and approval is required before this project can proceed. If approved, construction for the pipeline would begin in the spring of 2008.

Stantec is presently compiling an environmental, socio-economic and archaeological inventory of the study area. As an agency with jurisdiction or an interest in developments in the Study Area, you are invited to provide comments, or co-ordinate comments, regarding the proposed pipeline. Specifically, Stantec is seeking information regarding other projects in the Study Area that are proposed for development. This information will be incorporated into the ER study as a component of a cumulative effects assessment. Please contact us to discuss the most efficient way to obtain this information.

Your agency's response by July 13, 2007 would be appreciated.

Stantec

June 12, 2007

Reference: Notice of Second Public Information Session: Enbridge Gas Distribution Inc. – Natural Gas Pipeline to Serve the Northland Power Plant

A Second Public Information Session will be held to explain the proposed pipeline project, and present an opportunity for any interested parties to provide input on the Preliminary Preferred Route. This Second Public Information Session will be held at:

Fire Station Two – Thorold South
701 Allanburg Road
Thorold, Ontario
June 26, 2007
6:00pm – 9:00pm

Additionally, notice of the session will be advertised in local newspapers.

At this time, we invite you to provide or coordinate comments on behalf of your respective agency to assist us in the preparation of the ER. Information regarding other proposed developments in the area of the proposed pipeline is also requested to assist us in the assessment of cumulative effects.

If you have any questions regarding the ER for this pipeline project, please do not hesitate to contact me by calling collect to the number listed below.

Sincerely,

STANTEC CONSULTING LTD.

David P. Wesenger, B.E.S.
Senior Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
david.wesenger@stantec.com

Attachment: Study Area Map

Stantec Consulting Ltd.
361 Southgate Drive
Guelph ON N1G 3M5
Tel: (519) 836-6050
Fax: (519) 836-2493

June 12, 2007
File: 160960284

Dear Resident:

Reference: Notice of Second Public Information Session: Enbridge Gas Distribution Inc. – Natural Gas Pipeline to Serve the Northland Power Plant

In response to the Government of Ontario's request for new clean energy sources, Enbridge Gas Distribution Inc. ("Enbridge") is currently working on preliminary plans for a natural gas pipeline to serve the Northland Cogeneration Power Plant to be located on the property of Abitibi Paper Products. The project will require the construction of a new natural gas pipeline that would travel northwest from the point where TransCanada PipeLine's existing pipeline crosses Townline Road in Thorold, Ontario, and will predominantly follow existing right-of-ways (ROW).

Since our last correspondence on May 7, 2007 a Preliminary Preferred Route has been selected. This route is shown in the enclosed figure.

An independent consultant, Stantec Consulting Ltd. ("Stantec"), is conducting the Environmental Report (ER) for this project. Stantec's role will be to collect baseline natural environment and socio-economic data, and to prepare a report that will accompany Enbridge's application to the Ontario Energy Board expected in the summer of 2007. The Ontario Energy Board is the body that regulates the energy sector in the province and whose review and approval is required before this project can proceed. If approved, construction for the pipeline would begin in the spring of 2008.

This pipeline may be built adjacent to, opposite from, or across property owned by you. To learn more about the project and to provide input to the planning process, we invite you to attend an upcoming Second Public Information Session hosted by Stantec. Input received at the Second Public Information Session will be used to help confirm the alignment of the Final Route, and site specific protection or mitigation measures. Representatives from Enbridge will also be available at the Second Public Information Session to answer your questions. Details regarding the Second Public Information Session are as follows:

Fire Station Two – Thorold South
701 Allanburg Road
Thorold, Ontario
June 26, 2007
6:00pm – 9:00pm

Additionally, notice of the session will be advertised in local newspapers.

Stantec

June 12, 2007

Reference: Notice of Second Public Information Session: Enbridge Gas Distribution Inc. – Natural Gas Pipeline to Serve the Northland Power Plant

We hope that you will attend the Public Information Session. If you or a representative are not able to join us, as always, we welcome your call (519) 836-6050.

Sincerely,

STANTEC CONSULTING LTD.

David P. Wesenger, B.E.S.
Senior Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
david.wesenger@stantec.com

Attachment: Study Area Map

NOTICE OF SECOND PUBLIC INFORMATION SESSION

Northlands Pipeline Project

Enbridge Gas Distribution Inc. ("Enbridge") provides safe, reliable delivery of environmentally preferred natural gas to approximately 1.8 million residential, commercial, and industrial customers across Ontario. Enbridge is committed to environmental stewardship and conducts all of its operations in an environmentally responsible manner. As such, Enbridge is proposing to construct a natural gas pipeline to meet the demand for natural gas at the Northland Cogeneration Power Plant, a Gas-Fired Cogeneration Station in Thorold, Ontario.

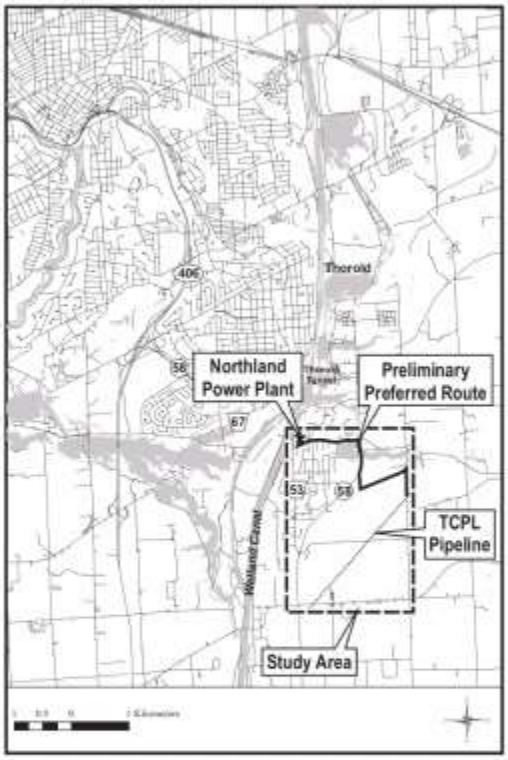
The proposed project includes constructing a Nominal Pipe Size (NPS) 12 (12-inch/305 mm) diameter steel pipeline. The proposed pipeline begins where TransCanada PipeLine's existing pipeline network crosses Townline Road in Thorold, Ontario, and ends at the Northland Cogeneration Power Plant to be located on the property of Abitibi Paper Products.

To assist with the environmental and planning aspects of this project, Enbridge has retained Stantec Consulting Ltd. ("Stantec") to prepare an Environmental Report ("ER"). The ER is being completed as required under the Ontario Energy Board's "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (May 2003)."

Enbridge is hosting a Second Public Information Session to provide you with an opportunity to review the project and provide input regarding the alignment of the Preliminary Preferred Route and the planning process. A Second Public Information Session regarding the proposed project is scheduled:

Fire StationTwo - Thorold South
701 Allanburg Road
Thorold, Ontario
June 26, 2007
6:00pm - 9:00pm

At this Second Public Information Session, representatives from Stantec and Enbridge will be available to explain the project and answer questions regarding the route selection process, the alignment of the Preliminary Preferred Route, construction procedures, and specific mitigation measures.



Input received from the Second Public Information Session will be used to determine the Preferred Route alignment and help develop site-specific protection and mitigation measures. Anyone having interest in this study is encouraged to contact Stantec at **david.wesenger@stantec.com** or call collect to (519) 836-6050. Written comments can also be mailed to:

David Wesenger
Senior Project Manager
Stantec Consulting Ltd.
361 Southgate Drive
Guelph, Ontario
N1G 3M5

Edwin Makkinga, B.Sc., CCEP
Environmental, Health & Safety Specialist
Enbridge Gas Distribution Inc.
500 Consumers Road
North York, Ontario
M2J 1P8

Enbridge will make additional information about the Northland Pipeline Project available as the project progresses. At this time, it is intended that information will be distributed through local newspapers.

Information will be collected and used in accordance with the Freedom of Information and Protection of Privacy Act, and solely for the purpose of assisting Enbridge in meeting environmental assessment and local planning requirements. This material will be maintained on file for use during the study and may be included in project documentation. With the exception of personal information all comments will become part of the public record.

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Pipeline to Service Northland Power Plant

An Enbridge Gas Distribution Inc. Pipeline Project

Information Newsletter June 26th, 2007.

THE PROJECT

Enbridge Gas Distribution Inc. ("Enbridge") is proposing to provide natural gas to serve the Northland Power Plant, to be located at the site of Abitibi Consolidated Inc. The proposed project involves the construction of a natural gas pipeline to originate from the TransCanada PipeLine's natural gas transmission corridor (Townline Road) to the Northland Power Plant located on Niagara Falls Road in the Township of Thorold South, County of Niagara.

The proposed project involves the construction of a 12-inch (305-millimetre) steel natural gas pipeline. The take off point is either at TransCanada PipeLine's corridor at Townline Road or at Enbridge's Black Horse Gate Station on Lundy's Lane. The termination point is at the site of Abitibi Consolidated Inc. and the future location of Northland Power's Cogeneration Plant.

Enbridge Gas Distribution Inc. provides safe, reliable delivery of environmentally preferred natural gas to approximately 1.8 million residential, commercial, and industrial customers across Ontario. Enbridge is committed to environmental stewardship and conducts all of its operations in an environmentally responsible manner.

PRELIMINARY PREFERRED ROUTE AND ALTERNATIVE ROUTES

SECOND PUBLIC INFORMATION SESSION

At the First Public Information Session, interested and affected parties were invited to review and comment on the proposed Enbridge pipeline project. Input received from the First Public Information Session, as well as agency and stakeholder meetings, was used by Stantec Consulting Ltd. ("Stantec"), an independent environmental consultant, to develop the Preliminary Preferred Route, and site-specific protection and mitigation measures.

The Second Public Information Session aims to provide interested and affected parties with an opportunity to review and comment on the proposed Enbridge pipeline project. Information pertaining to the Preliminary Preferred Route and site-specific protection and mitigation measures are especially appreciated at this time. Input received from the Second Public Information Session will be used by Stantec to confirm the Preferred Route, and develop site specific protection and mitigation measures. This information will be detailed in an Environmental Report (ER). Stantec's ER will be part of an application by Enbridge to the Ontario Energy Board (OEB) expected in the summer of 2007. The OEB is the body responsible for reviewing and approving all pipeline projects.

Pipeline to Service Northland Power Plant

An Enbridge Gas Distribution Inc. Pipeline Project

Information Newsletter June 26th, 2007.

LET US KNOW WHAT YOU'RE THINKING

We are interested in hearing your comments, addressing questions, and working with the communities and residents along the Preliminary Preferred Route to ensure the smooth and orderly development of the project.

Our ongoing approach to public communications and consultation includes a mix of providing information on the project plans and receiving input from interested people through the Public Information Sessions, exit questionnaires provided at the Public Information Sessions, and newsletters. Meetings with individual property-owners or groups who may be directly affected by the proposed project can be arranged to discuss project details and concerns.

At the Second Public Information Session, we particularly want your input on the Preliminary Preferred Route, site-specific protection and mitigation measures, and any other interests you might have regarding this project. You may provide comments at any point in the ER process.

WHAT HAPPENS AFTER THE PUBLIC INFORMATION SESSION?

After the Public Information Session, Stantec will evaluate the exit questionnaire results and other input and use this information to confirm the Preferred Route. It is Enbridge's hope that meetings with directly affected landowners can be scheduled to obtain information about individual property concerns related to the project.

The ER (to be completed in July 2007) will outline the plans to reduce and control effects of the pipeline on the environment, identify plans to monitor the project, and any other contingencies.

WHAT'S NEXT?

- Analysis of public input (May 2007)
- Identification of the Preliminary Preferred Route (June 2007)
- ER report completion (July 2007)
- Application to OEB (Summer 2007)
- Ongoing public consultation (Summer 2007)
- Land agent contact with directly affected landowners (Summer 2007)
- OEB hearing (Fall 2007)
- Construction subject to OEB approval (2008)
- Pipeline operation and maintenance (2008-onwards)

CONTACT THE PROJECT TEAM

For general inquiries contact:

Edwin Makkinga
Enbridge Gas Distribution Inc.
500 Consumers Road, 5th Floor
North York, Ontario M2J 1P8
Ph: 416-495-6789
Fax: 416-495-5523
Email: edwin.makkinga@enbridge.com

David Wesenger
Stantec Consulting Ltd.
361 Southgate Drive
Guelph, Ontario N1G 3M5
Ph: 519-836-6050 (call collect)
Fax: 519-836-2493
Email: david.wesenger@stantec.com

Stantec Consulting Ltd.
361 Southgate Drive
Guelph ON N1G 3M5
Tel: (519) 836-6050
Fax: (519) 836-2493

February 29, 2008
File: 160960284

«First»«Last», «Position»
«Agency»
«Address»
«City» «Prov» «Postal»

Dear «Title» «Last»:

Reference: Notice of Public Information Session: Enbridge Gas Distribution Inc. – Natural Gas Pipeline to Serve the Proposed Northland Power Plant

In response to the Government of Ontario's request for new clean energy sources, Enbridge Gas Distribution Inc. ("Enbridge") is currently working on preliminary plans for a natural gas pipeline to serve the proposed Northland Cogeneration Power Plant to be located on the property of Abitibi Consolidating Inc.

An independent consultant, Stantec Consulting Ltd. ("Stantec"), has been retained by Enbridge to prepare an Environmental Report (ER) for the proposed pipeline project. The proposed project involves the construction of a natural gas pipeline to commence at the location of TransCanada Pipelines natural gas transmission corridor and Townline Road, and will terminate at the proposed Northland Power Plant to be located on the property of Abitibi Consolidating Inc., on Allanburg Road, in Thorold South, Ontario.

Since our last correspondence on June 12, 2007 a Preferred Route was selected by Stantec and presented to Enbridge. After considering public input, Enbridge is reviewing the Preferred Route and considering an alternative Preferred Route. Stantec is now determining the acceptability of the alternative Preferred Route. The original Preferred Route and the alternative Preferred Route are illustrated on the enclosed figure.

Stantec is presently reviewing environmental, socio-economic and archaeological information within the Study Area that was collected during the original ER study process, April 2007 to August 2007, and determining if new information is available. As an agency with jurisdiction or an interest in developments in the Study Area, you are invited to provide comments, or co-ordinate comments, regarding the alternative Preferred Route. Any new information collected will be incorporated into the ER.

A response by **March 20, 2008** would be appreciated.

Stantec

February 29, 2008

Reference: Notice of Public Information Session: Enbridge Gas Distribution Inc. – Natural Gas Pipeline to Serve the Proposed Northland Power Plant

A Public Information Session will be held to explain the need for the alterations made to the original Preferred route, and present an opportunity for any interested parties to provide input on the alternative Preferred Route. This Public Information Session will be held at:

Fire Station Two – Thorold South
701 Allanburg Road
Thorold, Ontario
March 18, 2008
6:00pm – 9:00pm

Additionally, notice of the session will be advertised in local newspapers.

We hope that you will attend the Public Information Session. If you or a representative is not able to join us, as always, we welcome your call (519) 836-6050.

Sincerely,

STANTEC CONSULTING LTD.

Melanie Adamson
Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
Melanie.adamson@stantec.com

Attachment: Study Area Map

Stantec Consulting Ltd.
361 Southgate Drive
Guelph ON N1G 3M5
Tel: (519) 836-6050 Fax: (519) 836-2493
stantec.com

Stantec

February 29, 2008

Dear Landowner/Tenant:

Reference: Notice of Public Information Session: Enbridge Gas Distribution Inc. – Pipeline to Service Northland Power Plant

In response to the Government of Ontario's request for new clean energy sources, Enbridge Gas Distribution Inc. ("Enbridge") is currently working on preliminary plans for a natural gas pipeline to serve the proposed Northland Cogeneration Power Plant to be located on the property of Abitibi Consolidating Inc.

An independent consultant, Stantec Consulting Ltd. ("Stantec"), has been retained by Enbridge to prepare an Environmental Report (ER) for the proposed pipeline project. The proposed project involves the construction of a natural gas pipeline to commence at the location of TransCanada Pipelines natural gas transmission corridor and Townline Road, and will terminate at the proposed Northland Power Plant to be located on the property of Abitibi Consolidating Inc., on Allanburg Road, in Thorold South, Ontario.

Since our last correspondence on June 12, 2007 a Preferred Route was selected by Stantec and presented to Enbridge. After considering public input, Enbridge is reviewing the Preferred Route and considering an alternative Preferred Route. Stantec is now determining the acceptability of the alternative Preferred Route. The original Preferred Route and the alternative Preferred Route are illustrated on the enclosed figure.

Stantec's ER will accompany Enbridge's Leave-To-Construct application to the Ontario Energy Board expected in the summer of 2008. The Ontario Energy Board is the governing body that regulates the energy sector in the province and whose review and approval is required before this project can proceed.

To learn more about the project and provide input regarding the alteration made to the original Preferred Route, and the alignment of the alternative Preferred Route, we invite you to attend an upcoming Public Information Session hosted by Stantec. Input received at the Public Information Session will be used to help confirm route selection, and site-specific protection and mitigation measures. Representatives from Enbridge will also be available at the Public Information Session to answer your questions.

Details regarding the Public Information Session are as follows:

Fire Station Two – Thorold South
701 Allanburg Rd
Thorold, Ontario
March 18, 2008
6:00 pm to 9:00 pm

Additionally, notice of the session will be advertised in local newspapers.

Reference: Notice of Public Information Session: Enbridge Gas Distribution Inc. – Proposed Pipeline to Serve Northland Power Plant

We hope that you will attend the Public Information Session. If you or a representative is not able to join us, as always, we welcome your call (519) 836-6050.

Sincerely,

STANTEC CONSULTING LTD.

Melanie Adamson
Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
Melanie.adamson@stantec.com

Attachment: Figure A.4 - Original and Alternative Preferred Routes

NOTICE OF PUBLIC INFORMATION SESSION

Enbridge Gas Distribution Inc.
Pipeline to Service the Proposed Northland Power Plant

Enbridge Gas Distribution Inc. ("Enbridge") provides safe, reliable delivery of environmentally preferred natural gas to approximately 1.8 million residential, commercial, and industrial customers across Ontario. Enbridge is committed to environmental stewardship and conducts all of its operations in an environmentally responsible manner. As such, Enbridge is currently working on preliminary plans for a natural gas pipeline to serve the proposed Northland Cogeneration Power Plant to be located on the property of Abitibi Consolidating Inc.

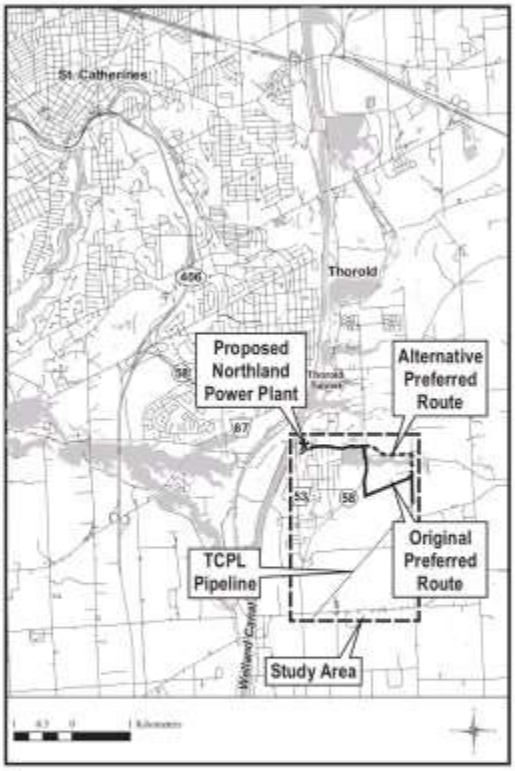
An independent consultant, Stantec Consulting Ltd. ("Stantec"), has been retained by Enbridge to prepare an Environmental Report (ER) for the proposed pipeline project. The proposed project involves the construction of a natural gas pipeline to commence at the location of TransCanada Pipelines natural gas transmission corridor and Townline Road, and will terminate at the proposed Northland Power Plant to be located on the property of Abitibi Consolidating Inc., on Allenburg Road, in Thorold South, Ontario.

In August of 2007, a Preferred Route was selected by Stantec and presented to Enbridge. After considering public input, Enbridge is reviewing the Preferred Route and considering an alternative Preferred Route. Stantec is now determining the acceptability of the alternative Preferred Route. The original Preferred Route and the alternative Preferred Route are illustrated on the enclosed figure.

Stantec's ER will accompany Enbridge's Leave-To-Construct application to the Ontario Energy Board expected in the summer of 2008. The Ontario Energy Board is the body that regulates the energy sector in the province and whose review and approval is required before this project can proceed.

Stantec is hosting a Public Information Session to provide you with an opportunity to review the project and provide input regarding the alignment of the alternative Preferred Route and the planning process. Details regarding the Public Information Session are as follows:

Fire StationTwo - Thorold South
701 Allenburg Road
Thorold, Ontario
March 18, 2008
6:00pm - 9:00pm



At this Public Information Session, representatives from Stantec and Enbridge will be available to explain the project and answer questions regarding the route selection process, the alignment of the alternative Preferred Route, construction procedures, and specific mitigation measures.

Input received from the Public Information Session will be used to confirm the alternative Preferred Route alignment and help develop site-specific protection and mitigation measures.

Anyone having interest in this study is encouraged to contact Stantec at david.wesenger@stantec.com or call collect to (519) 836-6050. Written comments can also be mailed to:

David Wesenger
Senior Project Manager
Stantec Consulting Ltd.
361 Southgate Drive
Guelph, Ontario
N1G 3M5

Edwin Makkinga, B.Sc., CCEP
Environmental, Health & Safety Specialist
Enbridge Gas Distribution Inc.
500 Consumers Road
North York, Ontario
M2J 1P8

Enbridge will make additional information about the Enbridge Gas Distribution Inc. Pipeline to Service Northland Power Plant available as the project progresses. At this time, it is intended that information will be distributed through local newspapers.

Pipeline to Service the Proposed Northland Power Plant

An Enbridge Gas Distribution Inc. Pipeline Project

Information Newsletter March 18th, 2008.

THE PROJECT

Enbridge Gas Distribution Inc. ("Enbridge") is proposing to provide natural gas to serve the proposed Northland Power Plant, to be located at the site of Abitibi Consolidated Inc. The proposed project involves the construction of a natural gas pipeline to originate from TransCanada PipeLine's natural gas transmission corridor (Townline Road) to the proposed Northland Power Plant to be located on Allanburg Road in Thorold South, County of Niagara.

The proposed project involves the construction of a 12-inch (305-millimetre) steel natural gas pipeline. The take off point is at TransCanada PipeLine's corridor at Townline Road. The termination point is at the site of Abitibi Consolidated Inc. and the proposed location of Northland Power's Cogeneration Plant.

Enbridge provides safe, reliable delivery of environmentally preferred natural gas to approximately 1.8 million residential, commercial, and industrial customers across Ontario. Enbridge is committed to environmental stewardship and conducts all of its operations in an environmentally responsible manner.

THIRD PUBLIC INFORMATION SESSION

Since the Second Public Information Session, that was held on June 26, 2007, a Preferred Route was selected by Stantec Consulting Ltd. ("Stantec") and presented to Enbridge. After considering public input, Enbridge is reviewing the original Preferred Route and considering an alternative Preferred Route. Stantec is now determining the acceptability of the alternative Preferred Route.

The Third Public Information Session is being held to provide interested and affected parties with an opportunity to review and comment on the alternative Preferred Route. Input received from the Third Public Information Session will be used by Stantec to confirm the Preferred Route, and develop site specific protection and mitigation measures. This information will be detailed in an Environmental Report (ER). Stantec's ER will be part of an application by Enbridge to the Ontario Energy Board (OEB) expected in the summer of 2008. The OEB is the body responsible for reviewing and approving all pipeline projects.

Pipeline to Service the Proposed Northland Power Plant

An Enbridge Gas Distribution Inc. Pipeline Project

Information Newsletter March 18th, 2008.

LET US KNOW WHAT YOU'RE THINKING

We are interested in hearing your comments, addressing questions, and working with the communities and residents along the Preferred Route to ensure the smooth and orderly development of the project.

Our ongoing approach to public communications and consultation includes a mix of providing information on the project plans and receiving input from interested people through the Public Information Sessions, exit questionnaires provided at the Public Information Sessions, and newsletters. Meetings with individual property-owners or groups who may be directly affected by the proposed project can be arranged to discuss project details and concerns.

At this Public Information Session, we particularly want your input on the alternative Preferred Route, site-specific protection and mitigation measures, and any other interests you might have regarding this project. You may provide comments at any point in the ER process.

WHAT HAPPENS AFTER THE PUBLIC INFORMATION SESSION?

After the Public Information Session, Stantec will evaluate the exit questionnaire results and other input and use this information to confirm the Preferred Route. It is Enbridge's hope that meetings with directly affected landowners can be scheduled to obtain information about individual property concerns related to the project.

The ER (to be completed in April 2008) will outline the plans to reduce and control effects of the pipeline on the environment, identify plans to monitor the project, and any other contingencies.

WHAT'S NEXT?

- Analysis of public input (March 2008)
- Identification of the Preferred Route (March 2008)
- ER report completion (April 2008)
- Application to OEB (Spring 2008)
- OEB hearing (Summer 2008)
- Construction subject to OEB approval (2009)
- Pipeline operation and maintenance (2009-onwards)

CONTACT THE PROJECT TEAM

For general inquiries contact:
Edwin Makkinga
Enbridge Gas Distribution Inc.
500 Consumers Road, 5th Floor
North York, Ontario M2J 1P8
Ph: 416-495-6789
Fax: 416-495-5523
Email: edwin.makkinga@enbridge.com

David Wesenger
Stantec Consulting Ltd.
361 Southgate Drive
Guelph, Ontario N1G 3M5
Ph: 519-836-6050 (call collect)
Fax: 519-836-2493
Email: david.wesenger@stantec.com

8.5 – ESDM Report by RWDI

An ESDM report by RWDI from 2007.

EXECUTIVE SUMMARY

This Emission Summary and Dispersion Modelling (ESDM) report is prepared in support of a Basic Comprehensive Certificate of Approval (C of A) for the applicant's facility located at 13168 Lundy's Lane, Thorold, Ontario. This application is being submitted to achieve compliance of Enbridge Gas Distribution Inc. (Enbridge) operations with the requirements of Section 9 of the Environmental Protection Act (EPA), R.S.O. 1990.

This proposal is for a Basic Comprehensive Certificate of Approval (Air & Noise) which is a single Certificate of Approval that replaces the existing Certificate(s) of Approval (Air & Noise) and includes the addition of new or historically unapproved sources for all emissions from the Enbridge Gas Distribution gate station providing pressure regulation and odourant addition to natural gas. The application includes all sources at the facility.

Enbridge operates a gate station that provides pressure regulation and odourant addition for natural gas distribution. Emissions at the site are due to natural gas combustion from three (3) boilers and testing of an emergency natural gas-fired generator. The purpose of this application is to amend the existing CofA to use a natural gas-fired emergency generator and relocate the boiler exhaust locations.

One (1) contaminant was identified with respect to the facility, emitted from four (4) sources.

For the purposes of this application, two (2) operating scenarios were investigated. The first scenario assessed the predicted impacts due to the natural gas-fired boilers operating simultaneously. Scenario 2 incorporates emissions from testing of the emergency generator in conjunction with emissions from the boilers. The boilers are assumed to be operating at maximum capacity in both scenarios. These scenarios were used as the basis for the dispersion modelling analysis, which was conducted for a 30-minute averaging time. Emission rates were determined through the following estimation techniques; emission factors and manufacturer specifications.

The facility is located at 13168 Lundy's Lane, Thorold, Ontario, and is bordered to the north by a Trans-Canada Pipeline (TCPL) station, to the west and east by agricultural lands, and to the south by a motel. The local terrain is flat, and was considered as such in the dispersion modelling analysis.

Concentrations at Points of Impingement (POI) were predicted using AERMOD. Predicted concentrations for all of the contaminants of significance were found to be less than their respective (POI) limits at all receptors in the area. The contaminant with the greatest percentage of the POI Limit was predicted to be nitrogen oxide (NO_x) with a value of 57%. Therefore, Enbridge is expected to be in compliance with Regulation 419 requirements.

Emission Summary Table

RWDI Project W05-5111B

Contaminant Name	CAS Number	Total Facility Emission Rate (g/s)	Air Dispersion Model Used	Maximum POI Concentration (µg/m³)	Averaging Period (hours)	MOE POI Limit (µg/m3)	Limiting Effect	Regulation Schedule #	Percentage of MOE POI Limit (%)
NOx (Boilers & Generator)	10102-44-0	0.45	AERMOD	1,072	0.5	1880	Health	3	57%
NOx (Boilers only)	10102-44-0	0.0093	AERMOD	85	1	400	Health	3	21%
				35	24	200	Health	3	18%

8.6 – ESDM Report by ORTECH

An ESDM report by ORTECH from 2020.

Executive Summary of the
Emission Summary and Dispersion Modelling Report
For the Blackhorse Gate Station (Facility ID: D07)
Dated April 7, 2020

Enbridge Gas Inc. (Enbridge) retained ORTECH Consulting Inc. (ORTECH) to update an Emission Summary and Dispersion Modelling (ESDM) Report for the Blackhorse Gate Station (the Facility) located at 13168 Lundy's Lane, Thorold, Ontario.

An ESDM report was prepared by RWDI Air Inc. on July 31, 2007 in support of application for a Basic Comprehensive Certificate of Approval (C of A). On March 11, 2014, a Province Wide Environmental Compliance Approval with Limited Operational Flexibility (Air) (PWECA 2192-8QWQCW) was issued for all sites across Ontario. Therefore, the Facility currently operates under the PWECA.

This ESDM Report is to assess the proposed modifications listed below:

- Replacement of the old emergency generator with one (1) new Generac QT070 70kW natural gas fired emergency generator.
- Replacement of three (3) old boilers with two (2) new 1.5MMBTU/hr Thermal Solutions natural gas fired boilers.
- New installation of one (1) 1.15 MMBTU/hr Cold Weather Technologies (CWT) dry line heater, which consist of three (3) boilers each having a heat input rating of 385,000 BTU/hr. For consistency, three (3) 385,000 BTU/hr dry line heater boilers are used and assessed throughout this ESDM report.

This ESDM Report follows the requirements of O.Reg. 419/05 (the Regulation) and the Ontario Ministry of the Environment, Conservation and Parks (Ministry) Guideline A-10 "Procedure for Preparing an Emission Summary and Dispersion Modelling Report, March 2018, Version 4.1," (the Procedure) (PIBs #3614e04), and Guideline A-11 "Air Dispersion Modelling Guideline for Ontario, February 2017, Version 3.0" (the ADMGO) (PIBs #5165e03), and references the Enbridge "Assessment Protocol for Distribution Station Emissions "prepared by ORTECH (the Protocol dated September 26, 2011).

The Facility will includes two (2) 1.5MMBTU/hr Thermal Solutions natural gas fired boilers, three (3) CWT dry line heater boilers each having a heat input rating of 385,000 BTU/hr, one (1) new Generac QT070 70kW natural gas fired emergency generator, a glycol heat exchanger, an odourant storage tank, and fugitive emissions from valves and fittings.

www.ortech.ca Mississauga • Sarnia • Windsor
804 Southdown Road, Mississauga, ON Canada L5J 2Y4 Tel 905-822-4120 • 877-774-6560 • Fax 905-855-0406

The Facility provides odorant addition and regulates pressure for natural gas distribution to its coverage areas. The NAICS Code applicable to the Facility is '221210 – Natural Gas Distribution'. Facilities described by this NAICS Code are not listed on Schedules 4 or 5 of Ontario Regulation 419/05 Air Pollution – Local Air Quality (O.Reg. 419/05) and are therefore allowed to demonstrate air compliance using the model in Appendix to RRO 1990, Regulation 346 until February 1, 2020. However, Enbridge has requested and been approved to apply advanced modelling (AERMOD) prior to the regulatory time frames and for the application of Schedule 3 Standards, under section 20(4) of O.Reg. 419/05.

The ESDM report includes the quantification of nitrogen oxides (NO_X) emission rates for all significant sources of contaminants at the Facility and an estimation of the aggregate maximum point-of-impingement (POI) concentrations of NO_X.

The Emission Summary Table (Table 1) shows:

- all of the significant sources and associated air contaminants;
- the maximum total facility emission rates and maximum ½-hour, 1-hour and 24-hour POI concentrations calculated by air dispersion modelling;
- the Ministry "Air Contaminants Benchmarks (ACB) List" Version 2.0 – April 2018 (Ministry POI Limits) used to evaluate all significant contaminant concentrations; and
- the maximum percentages of the Ministry POI Limits, where available, or the applicable alternative.

As shown in Table 1, the predicted maximum POI concentrations of nitrogen oxides resulting from the maximum emission scenario are below the Ministry POI Limits. Under the worst-case operation conditions described in Section 4 and exhaust parameters presented in Table 3, the boilers, the dry line heater boilers and the emergency generator comply with Ministry POI Limits and no further mitigation measures are required.

Table 1: Emission Summary Table

Scenario	Contaminant Name	Contaminant CAS #	Total Facility Emission Rate (g/s)	Air Dispersion Model Used (include version code)	Maximum POI Concentration [2] (µg/m³)	Averaging Period (hours)	Ministry POI Limit [3] (µg/m³)	Limiting Effect	Regulation Schedule #	Percentage of Ministry POI Limit (%)
All Boilers and Dry Line Heater	Nitrogen Oxides	10102-44-0	2.29E-02	AERMOD 16216r	149	1	400	Health	3	37%
					93	24	200	Health	3	47%
All Boilers, Dry Line Heater and Emergency Generator	Nitrogen Oxides	10102-44-0	1.31E-01		1,630	0.5	1,880	Health	[1]	87%

Note:

(i) From the Ministry publication 7976e "Emergency Generator Checklist, Supplement to Application for Approval, EPA s.9", November 2010.

(ii) Meteorological outliers have been removed from the results in accordance with Section 6.5 of the ADMGO.

(iii) "Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants, April 2018, Version 2.0" and the applicable Ministry publication 7976e "Emergency Generator Checklist, Supplement to Application for Approval, EPA s.9" (Ministry POI Limits).

8.7 – Artist's Rendering of the Future Sub-Division

An artist's rendering of what the sub-division that is being built across the street will look like.

8.8 – Amended Environmental Compliance Review

An amended environmental compliance review of the HydroOne substation.

Content Copy Of Original

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 8462-947T9Y
Issue Date: April 24, 2013

Hydro One Networks Inc.
483 Bay St 4th Floor, South Tower
Toronto, Ontario
M5G 2P5

Site Location: Allanburg Transmission Station
1210 Barron Rd
Thorold City, Regional Municipality of Niagara

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the establishment of sewage works for the collection, transmission, treatment and disposal of storm water drainage at the approximately 7 hectare Allanburg Transmission Station, which includes:

six (6) designated Yard Areas - 27.6 kV Area South, 115 kV Areas South, East, and North and 230 kV Areas South and North

crushed stone surface cover, gravel roads and parking areas

six (6) concrete transformer spill containment areas

several buildings

an outdoor Hydro Pole storage area

as detailed below:

Works - Proposed

TRANSFORMER SPILL CONTAINMENT

- upgrading of each of the six (6) existing spill containment areas for the existing six (6) transformers and the addition of three (3) oil/water separators, one (1) for each pair of transformers, all integrated into the existing Station Area storm water drainage systems, as follows:

27.6 kV Area South
- two (2) new, separate, similar, in-ground, concrete, spill containment areas, connected hydraulically at floor level, for Transformers T7 and T8, located along an east-west access road in the south-west area of the Station and including:
For T7, with approximately 23.5 cubic metres of oil and located east of T8

a concrete floor with dimensions of approximately 10.8 metres by 9.2 metres, with a minor south-east

corner cut-out

an internal concrete transformer foundation pad of approximately 6.5 metres by 3.5 metres

concrete curbing to a height of approximately 0.80 metres

crushed stone fill to a height of approximately 0.35 metres

a total containment volume of approximately 42.9 cubic metres which is more than required to hold the oil from the transformer and the storm water contribution of approximately 7.8 cubic metres over a 24 hour period from a 25 year return storm

connected by a 200 millimetre diameter stainless steel outlet pipe, at the north-west corner, at floor level, to the adjacent spill containment for T8;

For T8, with approximately 23.5 cubic metres of oil

a concrete floor with dimensions of approximately 10.8 metres by 9.2 metres, with a minor south-east corner cut-out

an internal concrete transformer foundation pad of approximately 6.5 metres by 3.5 metres

concrete curbing to a height of approximately 0.90 metres

crushed stone fill to a height of approximately 0.45 metres

a total containment volume of approximately 45.6 cubic metres which is more than required to hold the oil from the transformer and the storm water contribution of approximately 7.8 cubic metres over a 24 hour period from a 25 year return storm

a 200 by 100 millimetre diameter stainless Tee outlet with the 100 millimetre diameter stainless steel horizontal leg providing flow control and the vertical capped 200 millimetre leg providing clean-out access

to convey the combined collected spill containment storm water to Oil/Water Separator, OWS-1;

- one (1), new, in-ground, concrete Oil/Water Separator, OWS-1, approximately 8.4 metres by 3.8 metres by 1.8 metres deep, with a maximum design flow for oil separation of approximately 25 Litres per second which is greater than the calculated restricted inlet flow of approximately 20 Litres per second from the T8 containment, with:

two (2) above-grade access risers with hatch covers

a concrete wall running along the centre axis, from the inlet side wall, for a distance of approximately 6.6 metres dividing the space into two (2) 1.8 metres wide channels, to provide a continuous, extended "U-shaped" flow path

a 200 millimetre diameter stainless steel inlet pipe, extending to the centre of the inlet channel, with a downward oriented flow deflector Tee on the pipe end

a baffle approximately 1.35 metres high near the outlet with a 50 millimetre diameter opening at an invert approximately 0.3 metres above the floor

an oil capture volume of approximately 27.2 cubic metres, and

an outlet at the end of the outlet channel, in the form of a vertical 200 millimetre diameter stainless steel pipe extending from 0.25 metres above the floor into the access riser, with a teed-off, 200 millimetre diameter stainless steel horizontal outlet, at an invert elevation of approximately 1.05 metres above the pipe opening, positioned with respect to the spill containment elevations to maintain a water seal in case of an oil spill

draining via a 200 millimetre diameter HDPE pipe running to the north to Manhole MH101, which in turn drains to the east to MH15 on the Area 200 millimetre diameter cast iron storm sewer;

230 kV Area South
- two (2), new, separate, similar, in-ground, concrete, spill containment areas, connected hydraulically at floor level, for Transformers T1 and T2, located on the west side of the north-south Area access road, north-east of T7, and including:

For T2, with approximately 62.1 cubic metres of oil

a concrete floor with dimensions of approximately 13.7 metres by 11.0 metres, with truncated north-west and south-west corners

an internal concrete transformer foundation pad with rolling blocks

a 100 millimetre diameter opening at floor level in each of the two (2) internal rolling blocks

concrete curbing to a height of approximately 0.83 metres

crushed stone fill to a height of approximately 0.33 metres

a total containment volume of approximately 73.2 cubic metres which is approximately the volume required to hold the oil from the transformer and the storm water contribution of approximately 11 cubic metres over a 24 hour period from a 25 year return storm

connected by a 200 millimetre diameter stainless steel outlet pipe, at the south-east corner, at floor level, to the adjacent spill containment for T1;

For T1, with approximately 66.7 cubic metres of oil and located directly south of T2`

a concrete floor with dimensions of approximately 13.7 metres by 11.0 metres, with truncated north-west and south-west corners

an internal concrete transformer foundation pad with rolling blocks

a 100 millimetre diameter opening at floor level in each of the two (2) internal rolling blocks

concrete curbing to a height of approximately 1.04 metres

crushed stone fill to a height of approximately 0.54 metres

a total containment volume of approximately 82.0 cubic metres which is more than required to hold the oil from the transformer and the storm water contribution of approximately 11 cubic metres over a 24 hour period from a 25 year return storm

a 200 millimetre diameter stainless steel outlet pipe

to convey the combined collected spill containment storm water via a 200 millimetre diameter stainless steel line to the south to MH102;

- one (1) new concrete Manhole MH102, with a 100 millimetre diameter orifice plate on the outlet 200 millimetre diameter stainless steel line, to restrict flows to a maximum of approximately 19.4 Litres per second, draining to the east to OWS-2;

- one (1), new, in-ground, concrete Oil/Water Separator, OWS-2, approximately 9.1 metres by 7.6 metres by 2.2 metres deep, with a maximum design flow for oil separation of approximately 43.9 Litres per second which is greater than the restricted inlet peak flow of approximately 19.4 Litres per second, with

two (2) above-grade access risers with hatch covers over the inlet and outlet areas, respectively

two (2) internal concrete walls running along the length axis dividing the space into three (3) continuous flow channels for an extended "S-shaped" flow path

a 200 millimetre diameter stainless steel inlet pipe, extending to the centre of the inlet channel, with a downward oriented flow deflector Tee on the pipe end

a 1.75 metre high sediment capture baffle at the inlet with a 50 millimetre diameter opening through the wall with its invert 0.3 metres above the floor

an oil capture volume of approximately 78.4 cubic metres, and

an outlet at the south-east corner in the form of a vertical 200 millimetre diameter stainless steel pipe extending from 0.25 metres above the floor into the access riser, to provide siphon protection and sampling access, with a teed-off, 200 millimetre diameter stainless steel horizontal outlet, at an invert elevation of approximately 1.45 metres above the pipe opening, positioned with respect to the spill containment elevations to maintain a water seal in case of an oil spill

draining via a 200 millimetre diameter HDPE pipe running to the east to Manhole MH103, which in turn drains via a 200 millimetre diameter sewer to the north to existing Manhole MH13 on the existing Area 300/600/900 millimetre diameter concrete storm sewer running north for eventual discharge via a 1.2 metre culvert under the railway tracks located north of the Station, to a creek draining to the Welland Canal;

230 kV Area North

- two (2), new, separate, similar, in-ground, concrete, spill containment areas, for Transformers T3 and T4, located on the west side of the Area north-south access road and north of the 115/230 kV North Relay Building including:

For T3, with approximately 51.1 cubic metres of oil

an "inverted T-shaped" concrete floor area with dimensions of the widest rectangular part approximately 17.9 metres by 5.0 metres, along the front, east side, with an abrupt change to a 10.5 metres by 8.6 metres rectangle, caused by cut-outs along both sides

an internal concrete transformer foundation pad with rolling blocks

a 100 millimetre diameter opening at floor level in each of the two (2) internal rolling blocks

concrete curbing to a height of approximately 0.81 metres

crushed stone fill to a height of approximately 0.31 metres

a total containment volume of approximately 89.4 cubic metres which is more than the volume required to hold the oil from the transformer and the storm water contribution of approximately 13 cubic metres over a 24 hour period from a 25 year return storm

with a 200 millimetre diameter stainless steel outlet pipe, at the north-east corner, at floor level, running to the north to new Manhole MH104, located between the T3 and T4 containments;

For T4, with approximately 62.2 cubic metres of oil and located directly north of T3`

an "inverted T-shaped" concrete floor area with dimensions of the widest part approximately 17.4 metres by 4.7 metres, along the front, east side, with an abrupt change to 10.6 metres by 7.2 metres, caused by subsequent cut-outs along both sides

an internal concrete transformer foundation pad with rolling blocks

a 100 millimetre diameter opening at floor level in each of the two (2) internal rolling blocks

concrete curbing to a height of approximately 0.83 metres

crushed stone fill to a height of approximately 0.33 metres

a total containment volume of approximately 77.6 cubic metres which is more than required to hold the oil from the transformer and the storm water contribution of approximately 12 cubic metres over a 24 hour period from a 25 year return storm

with a 200 millimetre diameter stainless steel outlet pipe, at the south-east corner, at floor level, running to the south to new Manhole MH104, located between the T3 and T4 containments;

- one (1) new concrete Manhole MH104, with a 100 millimetre diameter orifice plate on the outlet 200 millimetre diameter stainless steel line, to restrict flows to a maximum of approximately 20.1 Litres per second, draining to the east to OWS-3;

- one (1), new, in-ground, concrete Oil/Water Separator, OWS-3, approximately 9.1 metres by 7.6 metres by 2.2 metres deep, with a maximum design flow for oil separation of approximately 44 Litres per second which is greater than the restricted inlet peak flow of approximately 20.1 Litres per second, with

two (2), above-grade access risers with hatch covers over the inlet and outlet areas, respectively

two (2) internal concrete walls running along the length axis dividing the space into three (3) continuous flow channels for an extended "S-shaped" flow path

a 200 millimetre diameter stainless steel inlet pipe, extending to the centre of the inlet channel, with a

downward oriented flow deflector Tee on the pipe end

a 1.75 metre high sediment capture baffle at the inlet with a 50 millimetre diameter opening through the wall with its invert 0.3 metres above the floor

an internal oil capture volume of approximately 78.4 cubic metres, and including:

an outlet at the south-east corner in the form of a vertical 200 millimetre diameter stainless steel pipe extending from 0.25 metres above the floor into the access riser, to provide siphon protection and sampling access, with a teed-off, 200 millimetre diameter stainless steel horizontal outlet, at an invert elevation of approximately 1.45 metres above the pipe opening, positioned with respect to the spill containment elevations to maintain a water seal in case of an oil spill

draining via a 200 millimetre diameter HDPE pipe running to the east to connect directly with the 900 millimetre diameter section of the existing Area concrete storm sewer, at a point downstream of Manhole MH10, and hence running to the north for eventual discharge via a 1.2 metre culvert under the railway tracks located north of the Station, to a creek draining to the Welland Canal;

- 150 millimetre diameter perforated HDPE subdrains surrounded with crushed stone and a geo-textile overwrap, paralleling new cable trenches with drainage connections to the existing Station storm sewer systems;

Works - Existing

STATION STORM WATER SEWERS

Draining the Areas - 115 kV East and 115 kV North - located along the east side and in the north-east corner of the Station

- one (1) existing 200 millimetre diameter vitrified tile storm sewer along the east side of the Station entrance road, in the 115 kv Area East, with Manhole MH6 at the south end and MH7 at the north end, near the Telecom Building, conveying storm drainage from a series of catch basin leads on either side of the sewer to the mid-point Manhole MH5;

- one (1) Area main storm sewer consisting of 300 and 450 millimetre diameter sections running west from MH5 to MH4 and then turning north and running across the 115 kV Area North and conveying storm drainage, from a series of area catch basin leads along the way, via downstream Manholes MH3 and MH2 to MH1, located near the Station northern perimeter fence,

- one (1), 300 millimetre diameter concrete outlet storm sewer from Manhole MH1 running to the north-west, off the station property and via a culvert under the railway tracks to a storm ditch which eventually drains to a creek and hence to the Welland Canal;

Draining the Areas - 27.6 kV South, 230 kV South and 115 kV South - located in the south and south-west parts of the Station

- three (3), parallel 100 millimetre diameter perforated HDPE subdrains, within a stone surround and a geo-textile wrap, running from west to east across the 27.6 kV Area south of the T7/T8 containments together with additional area perforated bitumin fibre perforated pipe subdrains and cable trench subdrains, all draining via a Catch Basin, additional sewer sections and MH15 to Manhole MH16;

- vitrified tile and cast iron storm sewers in the south-west 230 kV South part of the Station with contributions from area catch basin leads, draining via Manholes MH18 and MH16 to the east via a 450 millimetre diameter concrete sewer run from MH16 east to Manhole MH12;

- vitrified tile storm sewers in the 115 kV Area South, south of the T1/T2 containments, along with contributing catch basin leads and 150 millimetre diameter perforated HDPE subdrains, each within a clear stone surround and a geo-textile wrap, conveying storm drainage to Manhole MH13, which outlets to the north via a 300 millimetre concrete sewer to MH12;

- one (1) Area main storm sewer consisting of 600 and 900 millimetre diameter concrete sections running north across the 115 kV Area North, conveying storm drainage from catch basin leads and cable tray subdrains along the way including Control Building roof drainage from MH12, and downstream manholes MH11, MH10, MH9 and MH8A to MH8, located near the northern perimeter fence and west of the Pole Storage Area,

- one (1), 900 millimetre diameter concrete outlet storm sewer from Manhole MH8 running to the north, off the station property and via a culvert under the railway tracks to a storm ditch which eventually drains to a creek and hence to the Welland Canal;
Oil Storage Tank Pad -located north of the Oil Building

- one (1) concrete oil containment pad, approximately 17.5 metres by 12.2 metres with a 0.31 metre high perimeter curb, serving four (4) oil storage tanks, with storm drainage conveyed via a 152 millimetre diameter pipe to an adjacent pump-out manhole;

- one (1) concrete pump-out manhole, approximately 1.5 metres in diameter and 2.4 metres deep including:

an oil sensor with a pump interlock on the detection of oil

a discharge pump rated at approximately 1.9 Litres per second

discharging collected uncontaminated storm drainage from the oil containment pad to a storm sewer line to the west which drains to Manhole MH3 on the 115 kV Area North storm sewer, described previously;

Hydro Pole Storage Area

- one (1) outdoor hydro pole bunk storage area, located at the north end of the Station in the area between the 900 mm diameter storm sewer to the west and the 450 millimetre diameter storm sewer to the east, consisting of metal racks, elevated above ground, to maintain an inventory of chromated copper arsenate pressure treated poles, for use at Stations to replace old and damaged poles, as needed;

- erosion/sedimentation control works, as required, to meet best management practices during construction to minimize the amount of silt discharged off-site;

all in accordance with the following submitted supporting documents :

1. Application for the Approval of Plans and Specifications for the Construction of Works for the Collection, Transmission, Treatment and Discharge of Industrial Wastewater - Section 53, Ontario Water Resources Act, dated April 14, 1993 and signed by S. Money, Manager, Decew District Office, Ontario Hydro, with supporting information and drawings.

2. An information letter dated May 6, 1993 from Ken Plata, Environment Coordinator, Western region, Ontario Hydro, with additional detailed information and drawings.

3. A facsimile transmission dated May 19, 1993 from Ken Plata, Environment Coordinator, Western region, Ontario Hydro, with additional information on the oil absorbing filter medium.

4. An information letter dated September 27, 1993 from D. Haber, District Technical Supervisor, DeCew District, Ontario Hydro requesting an amendment to Certificate of Approval 4-0032-93-006.

5. Application for Approval of Industrial Sewage Works, dated December 2, 1994 and signed by D. Haber, Services Specialist, DeCew District, Ontario Hydro, with supporting information.

6. Environmental Compliance Approval Application, dated January 3, 2013 and signed by Brian McCormick, Manager, Environmental Services and Approvals, Hydro One Networks Inc., with a design brief and drawings.

7. Information letters dated March 8, 2013 and March 27, 2013 from Brian McCormick, Manager, Environmental Services and Approvals, Hydro One Networks Inc., with additional design information and an impact study proposal concerning pressure treated pole storage practices.

For the purpose of this environmental compliance approval, the following definitions apply:

"Approval" means this entire document and any schedules, within or attached to it, and the application;

"Director" means a person appointed by the Minister pursuant to Section 5 of Part I of the *EPA* for the purposes of *Part II.1 of the EPA;*

"District Manager" means the District Manager of the Niagara District Office of the Ministry;

" *EPA*" means the Environmental Protection Act , R.S.O. 1990, c.E.19, as amended;

"grab sample" is defined in Section 3.1.1 of the Ministry publication, 'Protocol For the Sampling and Analysis of Industrial/Municipal Waste Water', dated January 1999, and as amended;

"mg/L" means milligrams per Litre;

"Ministry" means the Ministry of the Government of Ontario responsible for the *EPA* and *OWRA* and includes all officials, employees or other persons acting on its behalf;

"Owner" means Hydro One Networks Inc., and includes its successors and assignees;

" *OWRA* " means the Ontario Water Resources Act , R.S.O. 1990, c. O.40, as amended;

"works" means the sewage works described in the Owner's application, this Approval and in the supporting documentation referred to herein, to the extent approved by this Approval;

the following symbol is an abbreviation for the monitoring frequency indicated:
"Q" means four times over a year, relatively evenly spaced where possible

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL CONDITION

(1) The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the works is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Except as otherwise provided by these Conditions, the Owner shall design, build, install, operate and maintain the works in accordance with the description given in this Approval, the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this Approval.

(3) Where there is a conflict between a provision of any submitted document referred to in this Approval and the Conditions of this Approval, the Conditions in this Approval shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

(4) Where there is a conflict between the submitted documents and the application, the application shall take precedence, unless it is clear that the purpose of the documents was to amend the application.

(5) The Conditions of this Approval are severable. If any Condition of this Approval or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

(6) This Approval will cease to apply to those parts of the proposed works which have not been constructed within three (3) years of the issue date of this Approval.

2. OPERATION AND MAINTENANCE

(1) The Owner shall ensure that the works and related equipment and appurtenances which are installed or used to achieve compliance with this Approval are properly operated and maintained.

(2) The Owner shall carry out on a regular basis specific maintenance requirements and scheduling to ensure proper operation of the works.

(3) In furtherance of, but without limiting the generality of the obligation imposed by Subsection (1), the Owner shall ensure that equipment and material for the containment, clean-up and disposal of oil and materials contaminated with oil are kept on hand and in good repair for immediate use in the event of:

(a) loss of oil from the Station transformers
(b) a spill within the meaning of Part X of the *Environmental Protection Act,* or

(c) the identification of an abnormal amount of oil in the Transformer spill containment areas or the Oil/Water Separators

2.1 POLE STORAGE AREA IMPACT STUDY

(1) The Owner shall provide to the District Manager, within 180 days of the issue date of this Approval, a report of the results of testing of the chromated copper arsenate treated hydro pole storage area, at

the Station, for impact on storm water runoff, soil and groundwater.

3. OPERATIONS MANUAL

(1) In furtherance of, but without limiting the generality of the obligation imposed by Condition 2, the Owner shall prepare an operations manual prior to the commencement of the operation of the works.

(2) The Owner shall ensure that the manual includes:

(a) operating procedures for routine operation of the works and for periodic self-monitoring of the Oil/Water Separator effluents
(b) inspection programs, including frequency of inspection, for the works and the methods or tests employed to detect when maintenance is necessary
(c) repair and maintenance programs, including the frequency of repair and maintenance, for the works, and
(d) a spill prevention, control and countermeasures plan to address loss of oil from the transformer and oil discharge offsite, including procedures for notifying the District Manager

(3) The Owner shall maintain the operations manual current, at the location of the works for as long as they are in operation, and shall make it available for inspection by Ministry staff upon request.

4. EFFLUENT OBJECTIVES

(1) The Owner shall use best efforts to design, construct and operate the works such that the concentration of the effluent parameter, named in the table below, is not exceeded in the respective effluents from OWS-1, OWS-2 and OWS-3:

EFFLUENT PARAMETER	MAXIMUM CONCENTRATION
Oil and Grease	15 mg/L
Phenol	20 ug/L
Polychlorinated Biphenyls	0.05 ug/L

(2) In the event of an exceedance of the objective set out in Subsection (1), the Owner shall,

(a) notify the District Manager as soon as possible during normal working hours
(b) take immediate action to identify the source of contamination, and
(c) take immediate action to prevent further exceedance.

5. EFFLUENT - VISUAL OBSERVATIONS

Notwithstanding any other Condition in this Approval, the Owner shall ensure that the effluent from the works is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen, foam or discolouration on the final receiving stream.

6. SAMPLES AND MEASUREMENTS

The Owner shall ensure that samples and measurements taken for the purposes of this Approval are taken at a time and in a location characteristic of the quality and quantity of the effluent over the time period being monitored.

7. EFFLUENT QUALITY MONITORING

(1) The Owner is exempted from the requirement of a regular, Approval-imposed effluent monitoring program for the herein approved works under the following conditions:

(a) The works shall be operated using Best Management Practices and in compliance with the established effluent objective as set out in Condition 4, Subsection (1), as confirmed, from time to time, by recorded self-monitoring data

(b) Ministry staff may enter the site of the works at any reasonable time to inspect the works which can include, but not be limited to, the taking of samples and copying of monitoring information from the station record, and

(c) The monitoring requirements as described under Subsection (2) below will be undertaken for twelve (12) months directly following a spill, with termination of the monitoring requirements to be determined by the District Manager at the end of the twelve month period.

(2) The Owner shall carry out the following effluent monitoring program immediately after a spill as defined under Condition 2, Subsection (3)(b):

(a) The Owner shall sample the effluents from the three (3) Oil/Water Separators, OWS-1, OWS-2 and OWS-3 at the outlet pipe, during a time period when there is a representative effluent flow moving through the outlet pipe, in accordance with the monitoring frequency and sample type specified in the table below and shall analyze the sample for the parameter named, unless otherwise required in writing by this Approval or by the District Manager:

EFFLUENT PARAMETER	MONITORING FREQUENCY	SAMPLE TY PE
Oil and Grease	Q	Grab
Phenol	Q	Grab
Polychlorinated Biphenyls	Q	Grab

(b) In the event of an exceedance of the objective set out in Condition 4, Subsection (1), the Owner shall increase the frequency of sampling of the effluent from the affected Oil/Water Separator, at the outlet pipe during a time period when there is a representative effluent flow moving through the outlet pipe, to once per month for each month that discharge occurs until it is demonstrated to the District Manager that the effluent complies with the said objective

(3) The methods and protocols for sampling, analysis, and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

(a) Ministry of the Environment publication "Protocol for the Sampling and Analysis of Industrial/ Municipal Wastewater", January 1999, as amended from time to time by more recently published editions, and

(b) The publication "Standard Methods for the Examination of Water and Wastewater", 21st edition, 2005, as amended from time to time by more recently published editions.

(4) The Owner shall retain for a minimum of three (3) years from the date of their creation, all records and information related to, or resulting from, the monitoring, inspection, testing and maintenance activities required by this Approval.

8. SOURCE WATER PROTECTION

The Owner shall, within sixty (60) calendar days of the Minister of the Environment posting approval of a Source Protection Plan on the environmental registry, established under the Environmental Bill of Rights, 1993 , for the area in which this Approval is applicable, apply to the Director for an amendment to this Approval that includes the necessary measures to conform with all applicable policies in the approved Source Protection Plan.

The reasons for the imposition of these terms and conditions are as follows:

GENERAL CONDITION

1. Condition 1 is imposed to ensure that the works are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.

OPERATION AND MAINTENANCE

2. Condition 2 is included to ensure that the works will be operated and maintained in a manner enabling compliance with the terms and conditions of this Approval, such that the environment is protected and deterioration, loss, injury or damage to any person or property is minimized and/or prevented.

POLE STORAGE AREA IMPACT STUDY/REVIEW REPORT

3. Condition 2.1 is included to secure information on the possibility of toxic chemicals leaching out of the pressure treated hydro poles stored on-site.

OPERATIONS MANUAL

4. Condition 3 is included to ensure that an operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept current by the Owner and made available to the Ministry, upon request. Such a manual is an integral part of the operation of the works. Its compilation and use should assist the Owner in staff training and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a bench-mark for Ministry staff when reviewing the Owner's operation of the works.

EFFLUENT OBJECTIVES

5. Condition 4 is imposed to establish effluent quality objectives which the Owner is obligated to use best efforts to meet on an ongoing basis. Also imposed are procedures to be followed to minimize environmental impact in the event the objectives are exceeded.

EFFLUENT REQUIREMENTS

6. Condition 5 is imposed to ensure that the effluent discharged from the works meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiving area.

MONITORING AND RECORDING

7. Conditions 6 and 7 are related to monitoring and record keeping. They have been imposed to require the Owner to demonstrate, when required, that the performance of the works is at a level consistent with the design and effluent objectives specified in the Approval, that the works are not causing any impairment to the receiving areas and that required operational information is available for review

SOURCE PROTECTION PLAN

8. Condition 8 is included to ensure that the works covered by this Approval will conform to the significant threat policies and designated Great Lakes policies in the Source Protection Plan.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 4-0032-93-006 issued on June 18, 1993, as amended.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario

M4V 1L5

*** Further information on the Environmental Review Tribunal 's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 24th day of April, 2013

Edgardo Tovilla
Director
appointed for the purposes of Part II.1 of
the *Environmental Protection Act*

TT/
c: District Manager, MOE Niagara
Jessica Chang, Hydro One Networks Inc.

8.9 – Historical Aerial Images

Historical aerial and satellite images of the site

Figure 35: An overhead view of the site, circa 1934. Courtesy of the Niagara Air Photo Index.

Figure 36: An overhead view of the site, circa 1948. Courtesy of the Niagara Air Photo Index.

Figure 37: An overhead view of the site, circa 1954 - 1955. Courtesy of the Niagara Air Photo Index.

Figure 38: An overhead view of the site, circa 1965. Courtesy of the Niagara Air Photo Index.

Figure 39: An overhead view of the site, circa 1968. Courtesy of the Niagara Air Photo Index.

Figure 40: An overhead view of the site, circa 1995. Courtesy of the Niagara Air Photo Index.

Figure 41: An overhead view of the site, circa 2000. Courtesy of the Niagara Air Photo Index.

Figure 42: An overhead view of the site, circa 2002. Courtesy of the Niagara Air Photo Index.

Figure 43: An overhead view of the site, circa 2006. Courtesy of the Niagara Air Photo Index.

Figure 44: An overhead view of the site, circa 2013. Courtesy of the Niagara Air Photo Index.

Figure 45: An overhead view of the site, circa 2015. Courtesy of the Niagara Air Photo Index.

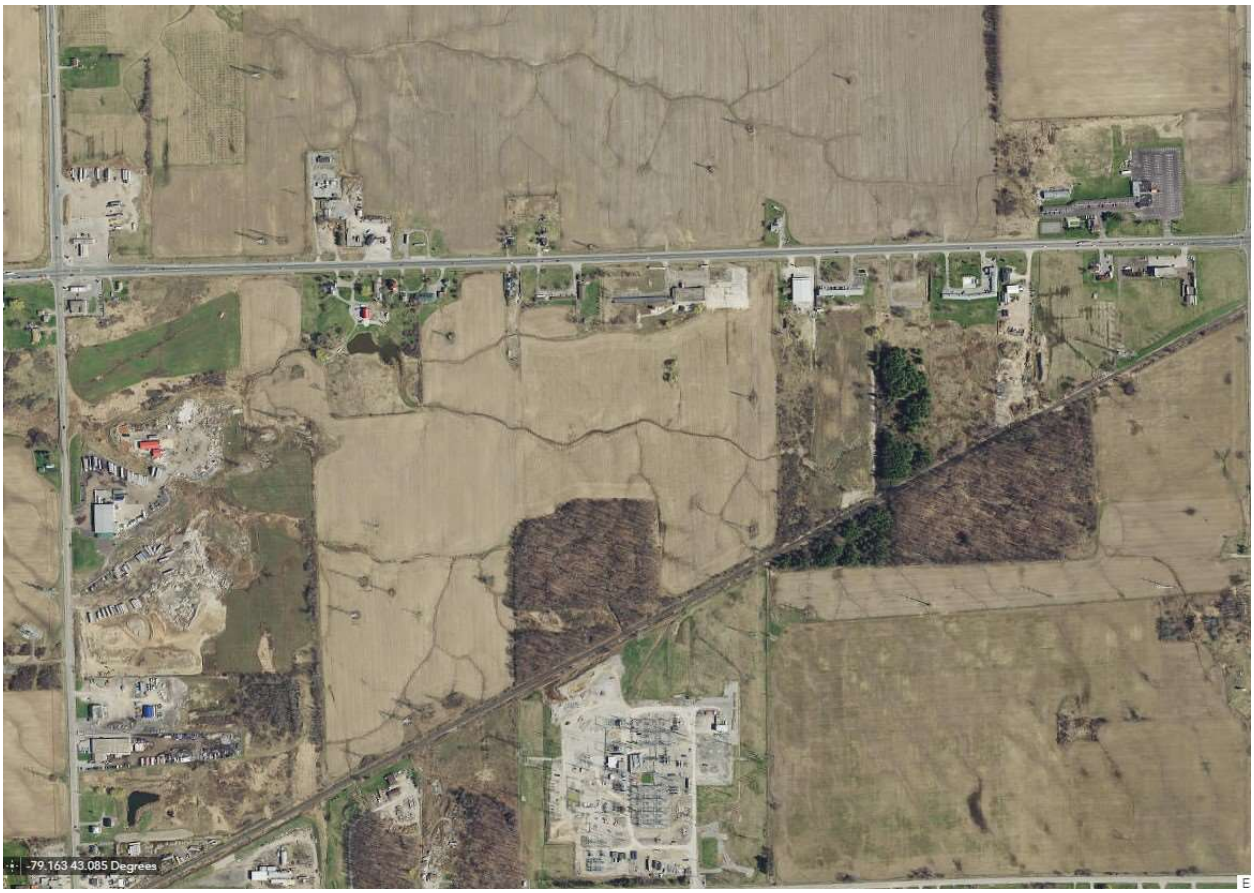
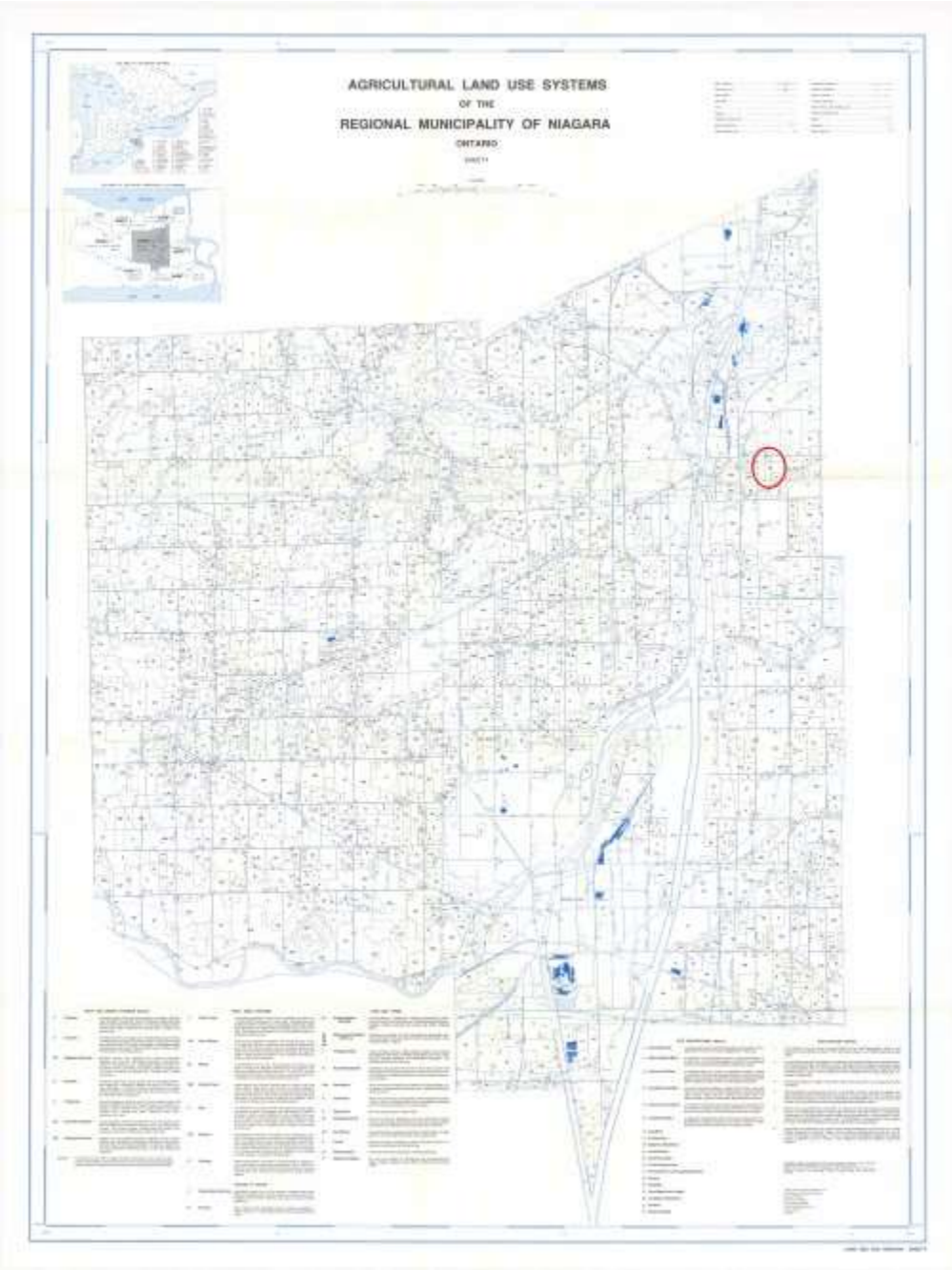


Figure 46: An overhead view of the site, circa 2018. Courtesy of the Niagara Air Photo Index.

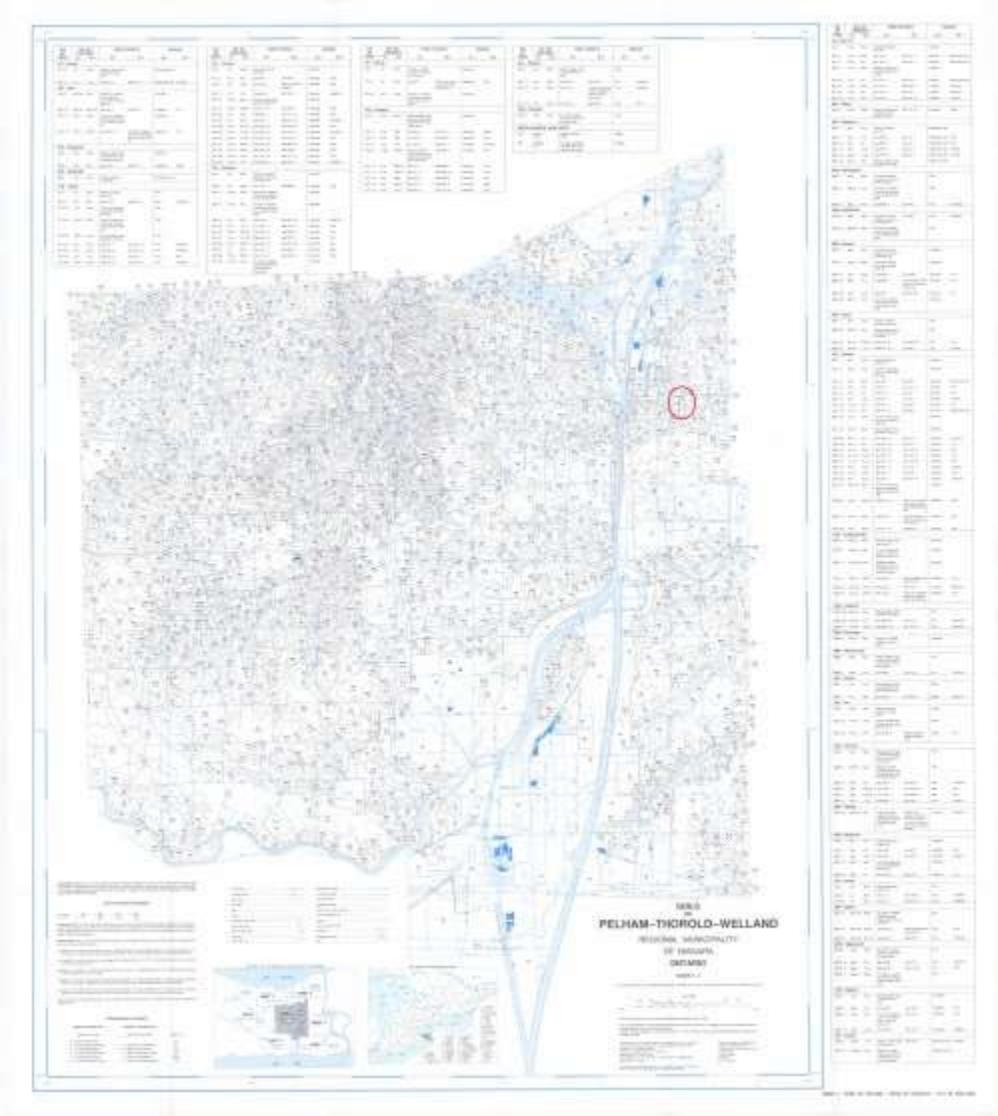
8.10 – Agricultural Land Use Systems Map of Niagara

Agricultural Land Use Systems map of Niagara (the site is circled in red).



8.11 – Soils Map of Niagara

Soils map of Niagara (the site is circled in red)



8.12 – Topographical Map of the Site

Figure 47: Topographical map of the site. Courtesy of the Government of Ontario.

8.13 – Interviews

Interview with Renee Delaney, owner of Small Scale Farms

1. What pesticides are being used on the property and how long has each one been used for?

   A: Ed is not going to want to answer this. The info is sensitive ie esp to those who don;t know anything about it.

   If this changes the results there's nothing we can do about it.

2. What is in the green storage tank marked "fuel" near the greenhouses?

   A: I would assume it's fuel for the tractor.

3. What is held in the other storage tanks on the property?

   A: Not sure. Again, he answered what he was willing to answer I believe, was this one of the questiions to him?

4. What is in the two containers beside the Hub building?

   A: one is for storage of kitchen supplies and the other is being built to grow microgreens and seedlings, not in use yet.

5. What is in the chest freezer next to the white storage container?

   A: Tools, the freezer doesn't work and is just storage for the moment and will be moved off site.

6. Are the gas cans in the garage empty?

   A: I don't know? If it's something we are not supposed to have there please let me know and I'll just move them?

   The current garage was cleaned out to be rebuilt so I imagine they just got put there.

7. What is the size of the property?

   A: 19 acres

Interview with Ed Hughes, owner of land

Has the property previously (or currently) been used for commercial manufacturing use, dry cleaning, as an industrial facility or gas station?
A: No

Are you aware of any industrial use of hazardous materials on site?
A: No

Has there ever been any structural demolitions on the property?
A: Yes

Are there any storage tanks (either above or below ground) on the property?
A: Yes

If yes, how many?
A: One

Has there ever been any form of spills or leaks (chemical or otherwise) on the property?
A: No

Are you aware of any fill material that has ever been brought onto the property?
A: No

Has the property ever been used for storage or related activities?
A: No

Do you manufacture or use any wood, paper, or pulp products on the property?
A: No

Has the property ever been used for asphalt or tar manufacturing?
A: No

Is any portion of the property currently undergoing any kind of construction or renovation?
A: Yes

Has road salt ever been present on the property?
A: Not with me

Has the property ever been used as a waste disposal site?
A: No

Is there a medical, chemical, or biological laboratory on the property?
A: No

Has the property ever been contaminated by substances migrating from other properties?
A: No

Have there ever been any pits, dumpsites, lagoons, or ponds on the property?
A: No

Are there any problems with odours on the property?
A: No

Are there any monitoring wells on the property?
A: Yes

Has there ever been any vent pipes, fill pipes or access ways on the property that indicate there is a fill pipe protruding from the ground?
A: No

Has there been a records review or environmental site assessment been done on the property in the past?
A: No

What is the source of water on the property?
A: well

How is waste collected from the property?
A: City sewer

Is there any liquid waste that is discharged on the site? If so, how is it discharged?
A: No

Are there any regulatory compliance issues on the property?
A: No

Based on your knowledge of the property, are there any signs of contaminants or release of contaminants on the property?
A: No

What species of grapes are grown on the property?
A: none

What species of apples are grown on the property?
A: Porter, Kingston, Chisel, Yarlington, Gold ruch, Dabinette, Blumers, Chevelle, Stokes

Do you have anything else to add?

A: Any studies or work on my Property must be OK'd by myself prior.

Interview with Leslie McCall, Small Scale Farms Hub Manager

Is there an apiary on site:

A: Yes

How long has the construction been happening for on site?

A: Late January – mid February. 3 weeks. Kit construction. No foundation. Dirt floor.

What is in the oil drums in the back?

A: They're empty. Will be disposed of.

What's in the storage containers at the back?

A: Orange Container: tools for the tarm.

White container: Microgreens.

Interview with Julian Dafoe of ECCC, Substances Management Information Line Officer

Is creosote a banned substance?

A: No but it is a heavily regulated chemical under the Pest Control Products Act by the PMRA.