



AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 6156-9FMME2

Issue Date: February 24, 2014

Hydro One Networks Inc.
483 Bay St, No. TCT 06 S
Toronto, Ontario, M5G 2P5

Site Location: Martindale Transformer Station
2199 Maley Dr
Greater Sudbury City, District of Sudbury
P3A 4R7

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:

Upgrade of existing sewage works for the collection, transmission, treatment and disposal of storm water runoff from a Station area of approximately 9.8 hectares, consisting of an approximately 5.6 hectare 230 kV Yard (West) and an approximately 4.2 hectare 115 kV Yard (East), with the following rational method calculated Station peak flows for storm events up to and including the 100 year return storm peak as discharged via the Station north-west and south-east drainage outlets, respectively:

Return Period	Post Development Peak Flow 230 kV Yard Area (m3/sec)	Post Development Peak Flow 115 kV Yard Area (m3/sec)
2-yr	0.17	0.25
5-yr	0.24	0.36
10-yr	0.28	0.41
25-yr	0.37	0.54
50-yr	0.45	0.67
100-yr	0.54	0.81

PROPOSED WORKS

Construction of one (1) rectangular spill containment area for new Transformer T22 (with approximately 66.8 cubic metres of PCB-free oil) of approximately 150 square metres footprint for T22, connected to a 150 mm stainless drainage pipe at floor level in south west corner of the containment to convey drainage to holding tank/oil-water separator HT/OWS2;

Modification of the existing rectangular spill containment area T21/T22, for existing Transformer T21 only (with approximately 64 cubic metres of PCB-free oil) of approximately 142 square metres footprint for T21, connected to a 150 mm stainless drainage pipe at floor level in north west corner of the containment to convey drainage to oil-water separator HT/OWS2; and

Removal of Transformer T1 (T61) from the station along with its associated sump.

PREVIOUS WORKS

IN THE 115 kV YARD - EAST PART OF THE STATION

TRANSFORMER SPILL CONTAINMENT FOR EXISTING TRANSFORMER T1 (to be removed as per *Proposed Works*)

- one (1) in-ground, concrete transformer spill containment area, located north-west of the Control Building, with a total containment volume of approximately 25 cubic metres which is more than would be required to hold the storm water contribution of approximately 8 cubic metres from a 24 hour, 25 year return storm and the transformer oil of approximately 14 cubic metres, including:

a new, concrete slab floor, approximately 10.0 metres by 6.4 metres, sloped to the north-west corner, replacing the existing polyethylene floor

a concrete foundation pad and concrete footings

concrete rolling pads inside the containment with flow-through 150 millimetre diameter openings through each leg at floor level

a removable curb section along the north part of the west wall

concrete curbing to a height of 0.75 metres above the floor, extending partly above grade

crushed stone fill to a height of 0.35 metres above the floor

one (1), new, 150 millimetre diameter stainless steel outlet pipe at floor level, with a wire mesh cover over the inlet, at the north-west corner area, running north to an adjacent Oil Control Manhole,

- one (1) existing, in-ground, concrete Oil Control Manhole, approximately 1.2 metres in diameter, with:

an inlet pipe from the containment, secured by a weld to a metal plate which, in turn, is bolted to the side of the Manhole with the previously used gravity flow outlet pipe plugged on both sides of the Manhole

an existing oil detection capacitance probe with a Control Room alarm at a preset oil layer thickness

one (1) discharge pump, rated at approximately 170 Litres per minute, operating on level control with a pump interlock tied to the oil detection system

discharging normally uncontaminated storm drainage via a 25 millimetre diameter HDPE pipe to existing Manhole MH6E, located on the Main North-South Storm Sewer which runs across the central part of the 115 kV Yard

STORM SEWERS AND SUBDRAINS

115kV Yard - Main Storm Sewer

- one (1) existing, Main North-South Storm Sewer, in the 115kV Yard, consisting of 150/200/250 millimetre diameter sections of vitrified tile, running :

south along the west side of the asphalt parking areas, from starting Manhole MH4E at its north end, via downstream Manholes MH5E, MH6E and MH7E to MH8E located south-east of the Battery Building, and

north from starting Manhole MH9E, at its south end, located west of the southern most asphalt parking area, via a 150 millimetre diameter vitrified tile run directly to MH8E

- from MH8E, continuation of the above Main Storm Sewer to the south-east via an initial run of 305 millimetre diameter concrete pipe to MH1E and then via a run of 380 millimetre diameter concrete pipe to MH10E, inside the fenceline in the south-east corner of the Station;

SUBDRAINS AND COLLECTOR STORM SEWERS

- an existing network of subdrains, typically 100 millimetre diameter field tile and bitumen fibre perforated pipe, connected to an integrated network of local secondary storm sewers;

- an existing network of 100 millimetre diameter vitrified tile secondary storm sewers with catch basins, positioned from north to south across the Yard, and located:

along the western perimeter of the 115 kV Yard within a mostly crushed stone surface area but including one (1) south-side paved parking area, and

on the east side of the Main North-South Storm Sewer generally within the paved parking areas and along paved access roads

to convey building roof, surface, road and parking area drainage and subdrainage to the Main North-South Storm Sewer, described previously;

115kV Yard - South-East Area Perimeter Storm Sewer

- one (1) existing 305 millimetre diameter solid-walled HDPE storm sewer, running from existing Manhole MH12E, located east of the Temporary Frequency Control Building, to the south to existing Manhole MH11E where it turns to the south-west to connect with Manhole MH10E, on the Main Storm Sewer, described previously;

- existing tie-ins of surface drainage from two (2) Catch Basins located west of the Temporary Frequency Control Building and roof drainage from the Service Building and the Temporary Frequency Control Building to the 152 millimetre diameter vitrified tile storm sewer which runs to Manhole MH12E

- one (1) new 300 millimetre diameter, solid-walled HDPE storm sewer running from new Manhole MH14E, located in an area approximately mid-way along the east wall of the Frequency Changer Building, to the south to new Manhole MH13E and then continuing south-east to existing Manhole MH11E, on the South-East Area Perimeter Storm Sewer receiving:

the Control Building basement sump pump discharges directly to MH14E, and

re-routed roof drainage from the Frequency Changer Building directly to MH13E

- one (1) existing section of 254 millimetre diameter vitrified tile sewer running south from MH3E,

located on the north side of the new Control Building Extension, under the Building foundation, to a tie-in point with a new storm sewer run as described below, collecting:

local Building subdrainage, and

north side parking area subdrainage and surface drainage via a Catch Basin CB34E lead

- one (1) new 375 millimetre diameter, solid-walled HDPE storm sewer, tied into the above described sewer at an access point just south of the Control Building Extension, and continuing south along the east side of the parking area, via existing Manhole MH2E, to existing Manhole MH1E, which is on the Main Storm Sewer, just upstream of MH10E, collecting along its route:

re-routed roof drainage from the Control Building, and

east side parking area subdrainage and surface drainage via a Catch Basin CB24E lead

115kV Yard - Exit Storm Sewers to the South-East Discharge Point

- one (1) existing Manhole MH10E, in the south-east corner of the Yard, with:

a 380 millimetre diameter concrete pipe Main Yard Storm Sewer inlet

a 300 millimetre diameter HDPE South-East Area Perimeter Storm Sewer inlet

a 380 millimetre diameter concrete pipe sewer outlet with a manual shut-off valve (normally open) conveying storm drainage to a rip rap lined area within a railway storm ditch, which drains to Junction Creek, and

a 305 millimetre diameter HDPE pipe outlet with a previously motorized shut-off valve converted to manual operation (normally open) conveying storm drainage to an adjacent existing holding tank/oil-water separator, HT/OWS1

- one (1) existing, concrete, in-ground holding tank/oil-water separator, HT/OWS1, internally approximately 7.0 metres long, 2.8 metres wide and 2.8 metres high, equipped with coalescing plates equivalent to a surface area of approximately 22 square metres, rated for a maximum design flow of approximately 270 Litres per second, discharging via a 375 millimetre diameter HDPE pipe to a rip rap lined area within a railway storm ditch which drains to Junction Creek;

IN THE 230kV YARD - WEST PART OF THE STATION

SPILL CONTAINMENT FOR EXISTING TRANSFORMERS T21/T22 AND T23

- two (2) new, separate, in-ground, concrete transformer spill containment areas, one (1) for Transformers T21 and T22 (to be modified as per *Proposed Works*) and the other for Transformer T23, arranged from north to south in the eastern part of the 230 kV Yard, on the west side of the main north-south access road into the Yard, with the respective transformers containing approximately 64, 50 and 48 cubic metres of oil, and including:

For T21/T22 Within the Same Containment (to be modified as per *Proposed Works*)

a sloped concrete floor approximately 22.9 metres by 9.7 metres

concrete transformer footings within the containment

concrete curbing to a height of 0.88 metres above the floor and extending above grade

0.43 metres of crushed stone fill

a provided total containment volume approximately 109 cubic metres, which is more than would be required to hold the collected rainfall from a 24 hour, 25 year return storm of approximately 24 cubic metres and a 64 cubic metre oil spill

one (1), 150 millimetre diameter stainless steel outlet pipe at floor level at the north-east corner running north to holding tank/oil-water separator, HT/OWS2

For T23

a sloped concrete floor approximately 13.0 metres by 9.7 metres

concrete transformer footings within the containment

concrete curbing to a height of 0.82 metres above the floor and extending above grade

0.37 metres of crushed stone fill

a provided total containment volume approximately 61 cubic metres, which is about 2% less than the volume required to hold the collected rainfall from a 24 hour, 25 year return storm of approximately 14.6 cubic metres and a 48 cubic metre oil spill

one (1), 150 millimetre diameter stainless steel outlet pipe at floor level at the north-east corner running east and then north to holding tank/oil-water separator, HT/OWS2

- one (1) new, in-ground, single compartment pre-cast concrete, vented holding tank/oil-water separator, HT/OWS2, approximately 10.0 metres by 4.5 metres by 2.25 metres deep, including an access riser with cover and the two (2) inlet pipes, described above, each with a 150 by 100 millimetre diameter eccentric flow reducer, designed to provide:

oil separation up to a maximum design flow rate of approximately 43 Litres per second which is greater than the predicted flow from a 25 year return storm and an oil spill

an oil holding volume of approximately 81 cubic metres as measured to 0.15 metres of the floor where the drop leg opening is positioned, and

including a 200 millimetre diameter stainless steel vertical standpipe (T-pipe) extending from 0.15 metres above the floor into the riser, to provide siphon protection, with a teed-off 200 millimetre diameter stainless steel horizontal outlet at an invert elevation of 1.59 metres above the pipe opening, positioned with respect to the spill containment elevations to maintain a water seal in case of an oil spill

with normal storm water effluent conveyed via a 150 millimetre diameter reducer to a 150 millimetre diameter HDPE solid-walled pipe which runs north to a new Sampling Catch Basin;

- one (1) new, covered, 0.6 metre square by 2.3 metre deep, concrete Sampling Catch Basin CB34W which outlets to the west via a 200 millimetre diameter HDPE pipe directly into a 405 millimetre

diameter transite pipe section of the existing 230 kV Yard East Side Main Storm Sewer, which runs north and then west to MH1W, the last manhole prior to discharge offsite via the north-west outlets;

SPILL CONTAINMENT FOR EXISTING TRANSFORMERS T25 AND T26

- two (2) new, separate, in-ground, similar concrete transformer spill containment areas for Transformers T25 and T26, arranged from west to east in the south-western part of the 230 kV Yard, with each transformer containing approximately 105 cubic metres of oil, and including for each spill containment:

a sloped concrete floor approximately 15.0 metres by 10.5 metres

concrete transformer footings and rolling pads

concrete curbing to a height of 1.0 metres above the floor and extending above grade

0.60 metres of crushed stone fill

a provided total containment volume approximately 108 cubic metres, which is sufficient to hold an oil spill but provides no containment for any storm water contribution

a 150 millimetre diameter stainless steel outlet pipe at floor level at the north-west corner of each containment running to an holding tank/oil-water separator, HT/OWS3, located to the north-west of the T25 containment

- one (1) new, in-ground, single compartment pre-cast concrete, vented holding tank/oil-water separator, HT/OWS3, approximately 12.0 metres by 4.5 metres by 3.0 metres deep, including an access riser with cover and the two (2) inlet pipes, described above, each with a 150 by 100 millimetre diameter eccentric flow reducer, designed to provide:

oil separation up to a maximum design flow rate of approximately 52 Litres per second which is greater than the predicted flow from a 25 year return storm and an oil spill

an oil holding volume of approximately 144 cubic metres as measured to 0.15 metres of the floor where the outlet leg opening is positioned, and

including a 200 millimetre diameter stainless steel vertical standpipe (T-pipe) extending from 0.15 metres above the floor into the riser, to provide siphon protection, with a teed-off 200 millimetre diameter stainless steel horizontal outlet at an invert elevation of 2.34 metres above the pipe opening, positioned with respect to the spill containment elevations to maintain a water seal in case of an oil spill

with normal storm water effluent conveyed via a 150 millimetre diameter reducer to a 150 millimetre diameter HDPE solid-walled pipe which runs west to a new Sampling Catch Basin

- one (1) new, covered, 0.6 metre square by 2.3 metre deep, concrete, Sampling Catch Basin CB33W which, outlets to the north-east via a 200 millimetre diameter HDPE pipe to new Manhole MH8W which drains to the east by a new run of 200 millimetre diameter HDPE pipe to existing Manhole MH6W, which is the starting point of the existing 350 millimetre diameter transite pipe, Central Main Storm Sewer, which runs north to MH2W and then west to MH1W, the last manhole prior to discharge offsite via the north-west outlets;

MAIN STORM SEWERS

230kV Yard - Along the East and North Sides of the Yard

- one (1) existing, East Side Main Storm Sewer, consisting of 350 and 450 millimetre diameter sections of vitrified tile, running :

north in the east side of the Yard along a path just west of the T21/T22 and T23 spill containment areas, from starting Manhole MH5W at its south end, via downstream Manholes MH4W to MH3W, located to south-west of the Telephone Building from where it runs to the west, as the North Side Main Storm Sewer, described below

- one (1) existing, North Side Main Storm Sewer, consisting of 450 and 500 millimetre diameter sections of vitrified tile, running west from starting Manhole MH3W at its east end, via downstream Manhole MH2W to MH1W, located inside the fenceline in the north-west corner of the Station

230kV Yard - In the Central Part of the Yard

- one (1) existing, Central Main Storm Sewer, across the central Yard area, consisting of a single run of 350 millimetre diameter vitrified tile, running north from existing Manhole MH6W at its southern end, located north of the Compressor Building, to Manhole MH2W, on the North Side Main Storm Sewer described above;

Telephone Building

- one (1) existing 102 millimetre diameter vitrified tile storm sewer running from the Telephone Building to the north-west to convey Building roof and subdrainage to a rip rap lined area in a roadside ditch which drains to the west;

SUBDRAINS AND COLLECTOR SEWERS

South Part of the 230kV Yard

- an existing network of subdrains, typically 89/100/150 millimetre diameter perforated pipe, within the south Yard area and along the access roads, connected to an integrated network of local secondary sewers;

- an existing network of secondary storm sewers throughout the south Yard area, typically 100/150/200 millimetre diameter, solid-walled, transite pipe, including catch basin feeds to convey building roof, surface, road and subdrainage to either the East Side Main Storm Sewer or to the Central Main Storm Sewer, described previously;

- existing 100 millimetre diameter perforated pipe subdrains along both sides of the road in the area north of the T25/T26 spill containment, tied into a 457 millimetre diameter culvert, to the east of T26, which links the south-side storm ditch to a second more northerly storm ditch which runs west and then north to drain to MH1W;

North Part of the 230 kV Yard

- an existing network of subdrains, almost all 89 millimetre diameter perforated pipe, laid out in a mostly east-west flow direction array across the Yard area with some north-south runs in the eastern part of the Yard and along the access roads, connected either directly to the three (3) Main Storm

Sewers in the Yard - East, North and Central or to area secondary sewers;

- two (2) north-south secondary storm sewers, typically 150/200 millimetre diameter, solid-walled transite pipe, located to the west and to the east of the Central Main Storm Sewer, including catch basin feeds along the sewer paths, to convey surface, road and subdrainage to the North Side Main Storm Sewer, described previously;

- additional short runs of east-west secondary storm sewers, on either side of the East Side Main Storm Sewer, including catch basin feeds to convey surface, road and subdrainage to the East Side Main Storm Sewer, described previously;

230 kV Yard - Exit Storm Sewers to the North-West Discharge Point

- one (1) existing concrete Manhole MH1W, in the north-west corner of the 230 kV Yard, with:

a 500 millimetre diameter transite pipe North Side Main Storm Sewer inlet

a 610 millimetre diameter corrugated steel pipe inlet from the perimeter storm ditch running along the west side and south-west side of the Yard

a 305 millimetre diameter carbon steel overflow outlet pipe, with a manual shut-off valve (normally open), which is sealed into a 762 millimetre diameter corrugated steel pipe which runs to the north conveying storm drainage to a rip rap lined area within the north side storm ditch, outside the Station fence, which runs to the west as a roadside ditch along Maley Drive

a 375 millimetre diameter HDPE pipe outlet running to the north-west to Manhole MH7W, which houses a previously motorized shut-off valve now converted to manual operation (normally open) and drains via a short outlet section of 305 millimetre diameter HDPE pipe to an adjacent existing holding tank/oil-water separator, HT/OWS4

- one (1) existing, concrete, in-ground holding tank/oil-water separator, HT/OWS4, internally approximately 7.0 metres long, 2.8 metres wide and 2.8 metres high, equipped with coalescing plates equivalent to a surface area of approximately 22 square metres, rated for a maximum design flow of approximately 270 Litres per second, discharging to the north-west, via a 375 millimetre diameter HDPE pipe to a rip rap lined area within the north side storm ditch, which runs to the west as a roadside ditch;

and other controls, piping, valves, drains, and appurtenances essential for the proper operation of the aforementioned sewage works,

all in accordance with supporting documents listed in **Schedule B** .

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

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

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

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

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

"Equivalent equipment" means a substituted equipment that meets the required quality and performance standards of a named equipment;

"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;

"Limited Operational Flexibility" (LOF) means the *Modifications* that the *Owner* is permitted to make to the *Works* under this *Approval* ;

" mg/L " means milligrams per Litre;

" ug/L " means micrograms 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;

"Modifications" means any addition, replacement, alteration, expansion or optimization for the *Works* as specified under *Limited Operational Flexibility*;

"Notice of Modifications" means the form entitled "Notice of Modifications to Sewage Works";

"Owner" means Hydro One Networks Inc. and 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, and this *Approval* , including the *Limited Operational Flexibility* " .

The following symbol is an abbreviation for the frequency indicated:

" Q " means quarterly, i.e. once every calendar quarter with at least 45 days between successive samples

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.

2. EXPIRY OF APPROVAL

(1) The *Approval* issued by this *Approval* will cease to apply to those parts of the *Proposed Works* which have not been constructed within **five (5) years** of the date of this *Approval* .

3. CHANGE OF OWNER

(1) The *Owner* shall notify the *District Manager* and the *Director* , in writing, of any of the following changes **within 30 days** of the change occurring:

(a) change of *Owner* or operating authority, or both

(b) change of address of *Owner* or operating authority or address of new owner or operating authority

(c) change of partners where the *Owner* or operating authority is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Partnerships Registration Act*

(d) change of name of the corporation where the *Owner* or operator is or at any time becomes a corporation, and a copy of the most current "Initial Notice or Notice of Change" (Form 1, 2 or 3 of O. Reg. 189, R.R.O. 1980, as amended from time to time), filed under the *Corporations Information Act* shall be included in the notification to the *District Manager*

(2) In the event of any change in ownership of the works, the *Owner* shall notify in writing the succeeding owner of the existence of this *Approval* , and a copy of such notice shall be forwarded to the *District Manager* .

(3) The *Owner* shall ensure that all communications made pursuant to this condition refer to this *Approval's* number.

4. 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) The *Owner* shall use best effort to identify and clean-up all losses of oil from the herein approved works to the environment.

(4) The *Owner* shall, upon identification of oil loss to the environment, take appropriate action to prevent the further occurrence of such loss.

(5) 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 spill containment areas, the Oil/Water Separator/Holding Tanks, the Oil Control Manhole or in the Sampling Catch Basins

5. OPERATIONS MANUAL

(1) In furtherance of, but without limiting the generality of the obligation imposed by Condition 4, 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 transformer spill containment 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

(d) a spill prevention, control and countermeasures plan to address loss of oil from the transformers 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.

6. EFFLUENT OBJECTIVES

(1) The *Owner* shall use best efforts to design, construct and operate the works such that the concentrations of the effluent parameters, named in the table below, are not exceeded in each of the following effluents:

A. Pumped Discharge from the Oil Control Manhole for the T1 Containment

B. Effluent From Oil/Water Separator/Holding Tank HT2 at Catch Basin CB34W

C. Effluent From Oil/Water Separator/Holding Tank HT3 at Catch Basin CB33W

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

(2) In the event of an exceedance of the objectives 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.

7. 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 receiver.

8. 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 of the effluent stream over the time period being monitored.

9. EFFLUENT QUALITY MONITORING

(1) The *Owner* is exempted from the requirement of a regular, *Approval*-imposed, effluent monitoring program for the effluents from the transformer spill containment 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 6, 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 4, Subsection (5)(b):

- (a) The effluent from the spill affected holding tank/oil-water separator or from the Oil Control Manhole, shall be sampled at the designated manhole, in accordance with the monitoring frequency and sample type specified in the table below and analyzed for the parameter named, unless otherwise required in writing by this *Approval* or by the *District Manager* :

EFFLUENT PARAMETERS	MONITORING FREQUENCY	SAMPLE TYPE
Oil and Grease	Q	Grab
Phenol	Q	Grab
Polychlorinated Biphenyls (PCBs)	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 affected effluent from the holding tank/oil-water separator or Oil Control manhole 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

(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, or longer if requested in writing by the *District Manager*, all records and information related to, or resulting from, the monitoring, inspection and maintenance activities required by this *Approval*.

10. SOURCE WATER PROTECTION

(1) 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 submission of a plan for action to comply with all applicable policies in the approved *Source Protection Plan*.

11. LIMITED OPERATIONAL FLEXIBILITY

(1) The *Owner* may make *Modifications* to the *Works* in accordance with the terms and conditions of this *Approval* and subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to Sewage Works", included under **Schedule A** of this *Approval*.

(2) Sewage works under *Limited Operational Flexibility* shall adhere to the design guidelines contained within the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended.

(3) The *Owner* shall ensure at all times, the *Works* and related equipment and appurtenances which are installed or used to achieve compliance are operated in accordance with all terms and conditions

of this *Approval* .

(4) For greater certainty, the following are not permitted as part of *Limited Operational Flexibility*:

(a) *Modifications* to the *Works* that result in an increase of the *Rated Capacity* of the *Works*;

(b) *Modifications* to the *Works* that adversely affect the approved effluent quality criteria or the location of the discharge/outfall;

(c) *Modifications* to the *Works* approved under s.9 of the EPA, and

(d) *Modifications* to the *Works* pursuant to an order issued by the *Ministry*.

(5) Implementation of *Limited Operational Flexibility* is not intended to be used for piecemeal measures that result in major alterations or expansions.

(6) If the implementation of *Limited Operational Flexibility* requires changes to be made to the Emergency Response, Spill Reporting and Contingency Plan, the *Owner* shall provide a revised copy of this plan for approval to the local fire services authority prior to implementing *Limited Operational Flexibility* .

(7) For greater certainty, any alteration made under the *Limited Operational Flexibility* may only be carried out after other legal obligations have been complied with including those arising from the *Environmental Protection Act* , *Niagara Escarpment Planning and Development Act* , *Oak Ridges Moraine Conservation Act* , *Lake Simcoe Protection Act* and *Greenbelt Act*.

(8) At least **thirty (30) days** prior to implementing *Limited Operational Flexibility*, the *Owner* shall complete a *Notice of Modifications* describing any proposed *Modifications* to the *Works* and submit it to the *District Manager*.

(9) The *Owner* shall not proceed with implementation of *Limited Operational Flexibility* , until a minimum of **thirty (30) days** after the day the *District Manager* has acknowledged receipt of the *Notice of Modifications* in writing or after receiving a written acceptance from the *District Manager* .

Schedule A

Limited Operational Flexibility Criteria for Modifications to Sewage Works

The *Modifications* to sewage works approved under an Environmental Compliance Approval (ECA) that are permitted under the *Limited Operational Flexibility* (LOF), are outlined below and are subject to the LOF conditions in the ECA . For clarity proposes, *Modifications* of equipment **does not** include process equipment where treatment unit operations occur, including but not limited to: screens, grit separators, blowers, oxygen diffusers, sludge thickeners and dewatering equipment, UV systems, chlorine contact tanks, bio-disks, digester gas handling systems, and process reactors.

Modifications of sewage works that are exempt from section 53 of the OWRA by O. Reg. 525/98

continue to be exempt and are not required to follow the notification process under this *Limited Operational Flexibility*. If there is a conflict between the list of sewage works listed below and the conditions in the ECA, the conditions in the ECA shall take precedence .

The following sewage works are permitted under *Limited Operational Flexibility*, and as per the conditions in the *Approval*:

1.0 Sewage Pumping Stations

1.1 Alter pumping capacity by adding or replacing equipment where new equipment is located within an existing sewage treatment plant site or an existing sewage pumping station site, where the facility rated capacity is not exceeded and while maintaining the existing flow process and/or treatment train, if applicable.

1.2 Replacing existing minor equipment with *Equivalent equipment* of different make and model, provided that there are no treatment process changes as a result of the replacement.

2.0 Inlet Works

2.1 Replacing existing minor equipment with *Equivalent equipment* of different make and model.

3.0 Sewage Treatment Process

3.1 Install or replace instrumentation or chemical dosage equipment for operational or maintenance purposes including replacing chemicals for pH adjustment or coagulants (non-toxic polymers) provided that there are no *Modifications* of treatment processes or other *Modifications* that may alter the intent of operations and may have negative impacts on *Works'* effluent quantity and quality.

3.2 Expansion of buffer zone between a sanitary sewage lagoon facility or land treatment area and adjacent uses where the buffer zone is entirely on the proponent's land.

3.3 Optimize existing sanitary sewage lagoons with the purpose to increase efficiency of treatment operations provided that existing sewage treatment plant rated capacity is not exceeded and where no land acquisition is required.

3.4 Replacing existing minor equipment with *Equivalent equipment* of different make and model, provided that there are no treatment process changes as a result of the replacement.

4.0 Sewage Treatment Process Outfall

4.1 Replacement of discharge pipe with similar pipe size provided that the outfall location is not changed.

5.0 Sanitary Sewers

5.1 Pipe relining and replacement with similar pipe size to the approved site location's existing sanitary sewers and forcemains sewage collection system. The sewer main *Modifications* shall **not** include **combined sewers** .

5.2 Sanitary gravity sewers and forcemains within the approved site location, except those with a nominal diameter greater than 1,200 mm.

6.0 Stormwater Management System

6.1 *Modifications* of stormwater management works to service the existing approved drainage area located within the site, provided that there is no increase in the average impervious area established in the original design and the discharges from the site will not exceed the attenuated flows established in the original design.

6.2 Installation of new oil grit separators.

7.0 Pilot Systems

7.1 Installation of pilot systems for new or existing technologies provided that:

(a) any effluent from the pilot system is discharged to the inlet of the main sewage treatment plant or hauled off-site for proper disposal,

(b) any effluent from the pilot system discharged to the inlet of the main sewage treatment plant does not significantly alter the composition/concentration of the influent sewage to be treated in the downstream process; and that it does not add any inhibiting substances to the downstream process, and

(c) the pilot system's duration be of up to a maximum of **two years** ; and a report with results is submitted to the *Director* and *District Manager* **three months** after completion of the pilot project.

Schedule B

Environmental Compliance Approval (ECA) supporting documents:

1. Application for Approval of Industrial Sewage Works dated April 8, 1997 and signed by David Bray, Maintenance Engineer, Grid District Operations Division, Ontario Hydro, including design information, calculations and drawings in support of Certificate of Approval No. 4-0045-97-006, issued May 14, 1997;
2. Application for Approval of Industrial Sewage Works dated August 5, 1997 and signed by Rob Chandok, P.Eng., Ontario Hydro, including design information, calculations and drawings in support of Certificate of Approval No. 4-0089-97-006, issued September 18, 1997;
3. Application for Approval of Sewage Works dated April 13, 2011 and signed by Brian McCormick, Manager, Environmental Services and Approvals, Hydro One Networks Inc., including design information and drawings;
4. An information letter dated July 12, 2011 from Brian J. McCormick, Manager, Environmental Services and Approvals, Hydro One Networks Inc., with corrected design calculations and additional design information.
5. Environmental Compliance Approval Application for Sewage Works dated December 10, 2013 signed by Brian McCormick, and cover letter submitted by Brian McCormick of Hydro One Networks Inc., dated October 15, 2013;
6. A Design Brief entitled "Martindale TS – Transformer Replacement and New Spill Containment";
7. Articles of Incorporation No. 1344260, dated April 11, 2000;

8. Engineering Drawing No. FS9-D0S-79310-0004 entitled "Spill Containment for Transformers T21, T22 and T23", dated January 13, 2011 and prepared by Hydro One Networks Inc.; and

9. Engineering Drawing No. FS9-D0S-12400-0002 entitled "Station Drainage Flow Diagram" dated March 16, 2011 and prepared by Hydro One Networks Inc.

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.

EXPIRY OF APPROVAL

2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

CHANGE OF OWNER

3. Condition 3 is included to ensure that the *Ministry* records are kept accurate and current with respect to approved works and to ensure that subsequent owners of the *Works* are made aware of the *Approval* and continue to operate the *Works* in compliance with it.

OPERATION AND MAINTENANCE

4. Condition 4 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.

OPERATIONS MANUAL

5. Condition 5 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

6. Condition 6 is imposed to establish non-enforceable 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

7. Condition 7 is imposed to ensure that the effluent discharged from the works meets the Ministry's effluent quality requirements, as specified, on a continuous basis thus minimizing environmental impact on the receiver.

MONITORING AND RECORDING

8. Condition 8 and 9 are related to sampling, 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 it does not cause any impairment to the receiving areas and that required operational information is available for review.

SOURCE PROTECTION

9. Condition 10 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*.

LIMITED OPERATIONAL FLEXIBILITY

10. Condition 11 is included to ensure that the *Works* are operated in accordance with the application and supporting documentation submitted by the *Owner*, and not in a manner which the *Director* has not been asked to consider. These conditions are also included to ensure that a Professional Engineer has reviewed the proposed *Modifications* and attests that the *Modifications* are in line with that of *Limited Operational Flexibility*, and provide assurance that the proposed *Modifications* comply with the Ministry's requirements stipulated in the terms and conditions of this *Approval*, MOE policies, guidelines, and industry engineering standards and best management practices.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 4159-8HUQGX issued on August 22, 2011

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 February,
2014

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

YK/
c: District Manager, MOE Sudbury
Jessica Chang, Hydro One Networks Inc.