AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 2322-DABL3U
Issue Date: November 6, 2024

INVISTA (Canada) Company
1400 County Road 2 E
Post Office Box, No. 404
Maitland, Ontario
K0E 1P0

Site Location: Maitland site
1400 #2 County Rd E
Township of Augusta, United Counties of Leeds and Grenville
K0E 1P0

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:

modifications at the existing sewage works serving Invista (Canada) Company located at the subject Maitland site to allow the manufacture of Hexamethylene Diamne (HMD, comprising of the following works:

Proposed Works

BTP Recycle Pump

A pump and 152-millimeter diameter piping to recirculate Aerobic Basin contents to the Anoxic Basin for improved treatment efficiency. The pumping capacity of 1000 USGPM is controlled by a variable speed drive on the pump motor.

Caustic Storage Tank and Injection Pump

- One (1) 6000-gallon capacity tank containing sodium hydroxide, located inside the B311 south-east containment area.

- One (1) injection pump discharging to the existing 152-millimeter diameter above ground, SS Process Waste Header from the B311 Sump to the BTP. The pump, flow control valve, and flow instrument are sized to provide a flow of up to 1 USGPM.

Reverse Osmosis Unit Clean-In-Place

- Clean in Place (CIP) system for the existing RO units used for the treatment of boiler feed water in B116 Powerhouse. The effluent from the CIP skid discharges approximately 25 USGPM of spent material, in a batch operation, containing caustic and a weak acid to the existing Powerhouse sewer to the site effluent.

Building 413 Trench Overflow to B413 South Peripheral Containment

- A 230-millimeter-wide trench constructed at the north-west edge of the B413 truck loading/unloading pad and extending southward along the north-east edge of the pad for approximately 3 meters.

- A 76-millimeter SS underground drainpipe from the truck loading/unloading pad trench to the existing B413 South Peripheral Containment.

- A 76 millimeter SS overflow drainpipe from the existing B413 Floor trench Sump to the B413 truck loading/unloading pad trench.

Existing Works

existing sewage works for the collection, transmission, treatment and disposal of wastewater, cooling water, storm water and sanitary sewage, consisting of the following:

INTAKE WATER AT THE RIVER PUMP HOUSE

Chlorination Works

- one (1) automatic sodium hypochlorite solution addition system including a storage tank, a storage tote and metering pumps and piping to convey approximately 12-15 percent sodium hypochlorite solution to the intake water pump sump;

Dechlorination Works

- dechlorination facilities south of County Road # 2, consisting of one (1), 31 cubic metre sodium bisulphite solution storage tank and two (2) metering pumps (one on stand-by), each with a maximum pumping rate of 10 millilitres per second to add sodium bisulphite to the combined Site effluent with the dechlorinated effluent discharged via Control Point 1100 to the St. Lawrence River via the twin outfall pipes;

- spill containment sump serving the sodium bisulphite/sodium hypochlorite tank truck unloading pad, with the sump having dimensions of approximately 4.6 metres by 1.2 metres by 1.2 metres deep, complete with a valve, discharging uncontaminated storm water via a 100 millimetre diameter sewer to the 250 millimetre diameter storm sewer pipe; and

- secondary containment for the sodium hypochlorite and sodium bisulphite storage tanks, outside of the Pump House, consisting of a concrete dike with a sump and gravity drain controlled by a valve, discharging to the

storm sewer pipe.

CRIB DITCH

- one (1) wood-lined, rectangular, open channel structure, approximately 2.1 metres deep and 1.8 metres wide, starting at a point in the area north-east of Building 411, and running west to a point beyond "D" Avenue where part of the ditch flow is split off into a southern ditch to feed Detention Pond #1 with the rest of the ditch flow continuing west to Detention Ponds #2 and #3, conveying process effluents, condensate, storm water and Power House boiler blowdown from sewer outlets and from overhead piping, from the Amines Production Areas on either side along its route, from the Power House, and from other Plant Areas, including the following specified effluents via headers as listed below:

B213 Sump

- located on the west side of Building 213, previously collecting wastewater from sewers in Buildings 212 and 213, wastewater from the south dike containment area and the Column 300 area, now discharging storm water via 406 millimetre diameter overflow line to nearby Foam Retention Basin and eventual discharge to the north-south leg of the Crib Ditch which normally drains to the #1 Detention Pond;

B214 North Sump

- located at the north end of Building 214, previously collecting wastewater from the east and west side floor trenches in the Building and wastewater from the low temperature converter area, modified by the installation of a new HDPE outlet pipe on the west side to tie into the existing 457 millimetre diameter stainless steel/vitrified clay sewer running to the B214 South Sump and eventual discharge to the Crib Ditch;

B214 South Sump

- located south-west of Building 215, previously collecting wastewater from the Nitric Acid Feed Mix (NAFM) containment/pump area, the nitric Acid pre-heater containment area, and the Building 214 south floor drains, modified by the installation of a 6 inch PVC outlet pipe to an existing wall flange on the east side, which will drain to the Crib Ditch;

B216 South Sump

- located south of Building 216, previously collecting wastewater from floor trenches in B216, modified by the addition of a new PVC drain line through the south wall to an existing nearby catch basin on an existing storm drain to the Crib Ditch

B216 Refining Sump

- located in the north-west end of Building 216, previously collecting wastewater from the north bay of Building 216, from the adipic acid bagging building (Building 221), now collecting storm water from the adipic acid truck loading building (Building 217) and draining via overflow pipe to the B216 South Sump for

eventual discharge to the Crib Ditch;

B217 Adipic Acid Truck Loading Area

- one (1) concrete pad with a roof cover, approximately 10.0 metres by 3.4 metres, built above grade and sloped toward a central stainless steel trench collection system running along its length, located in the Adipic Acid Truck Loading Area north of Building 217, collecting some storm drainage and directing it to the south via a run of approximately 14 metres of 100 millimetre diameter stainless steel pipe to a 150 millimetre diameter process sewer on the east side of Building 221 which drains to the Building 216 Refining Sump for eventual discharge to the Crib Ditch;

B220/221 Fire Water Protection Building

- collection of the sump water from Buildings B-220 and B-223 (both small buildings house fire water protection facilities) and discharge via an underground line to the exit of the Detention Ponds

B511 Sump

- located north of Building 511, previously collecting wastewater from the Building 511 fume abatement column area floor drains and wastewater from the pump pads and truck loading/unloading pad spill containment north of Building 511, modified by redirecting the floor drains from Building 519 to the existing sump overflow line outside of the Sump which flows over paved ground to the catch basin at the east wall of Building 511 which is part of an existing storm sewer discharging to the Crib Ditch;

Foam Retention Basin

- located south-west of Building 213, collecting storm water from the overflow of the B213 sump, now with a gravity drain discharging to the north-south leg of the Crib Ditch, normally draining to the #1 Detention Pond;

Amines Area Cooling Water

- non-contact cooling water return headers in the Amines Area Building B412

- one (1), 50-millimetre diameter header in the Amines Refining Building 413, collecting uncontaminated cooling water streams via a floor trench, with discharge to the Crib Ditch system;

- one (1), 152-millimetre diameter carbon steel sewer to convey cooling water from Building 311 to the Crib Ditch;

Amines Area Storm Water

- collection and discharge of storm water from containment facilities in the Amines Area, including:

- B 211 storage tank containment area and railcar unloading area
- B-311 courtyard containment serving the methanol storage tank area the B-311 truck loading area, the north containment area for the MPMD High Boiler Removal Column
- B-315 railcar loading/unloading containment.
- B-413 north peripheral containment (includes tankage outside the roofline of the building) with a drain to the crib ditch

- collection and discharge of the containment facilities for B-415 storage tanks via the storm water system

- collection and discharge of the B-414 non-contact cooling water, B-413 south peripheral containment, and the B-417 containment area via underground lines to the storm water ditch leading to the outlet of the detention ponds

Amines Area Containment Drainage

Building 211- Amines Raw Material Storage Containment

- located at the north-east corner of the Storage Area (Building 211), collecting wastewater and storm water from the containment and unloading area, modified by the installation of a HDPE drain pipe near the bottom of the sump equipped with a valve, to redirect storm water to a nearby existing catch basin on an existing storm sewer running south directly to the #3 Detention Pond. The valve will normally be closed but opened upon prior analysis of contents to ensure discharge objectives are met. A sump pump and discharge into the 307-millimeter Main BTP Wastewater Collection Header will remain in service for occasions when analysis indicates contents do not meet objectives;

Building 311 - North Methanol Storage Containment

- one (1) spill containment area, adjacent to Building 311 for two (2) methanol storage tanks, a methanol still/evaporator and a Dibasic Ester (DBE) reactor, approximately 18.3 metres by 6.2 metres, providing a containment volume of approximately 35 cubic metres with concrete curbing and a concrete floor which is sloped to a 0.3 metre wide, grating-covered collection trench which drains through a 102 millimetre diameter valve-controlled opening (normally closed) in the north curb wall of the sump which is part of a second trench collection system serving the concrete access pad to the north;

- one (1) emergency overflow weir in the north wall of the above containment, approximately 1.2 metres wide and 102 millimetres below the top of the rest of the north wall, positioned directly over the sump described above;

- one (1) truck access pad, approximately 12.4 metres by 4.3 metres, enclosed on the west, north, east, and partly on the south, by a grating-covered perimeter collection trench, approximately 0.30 metres wide by 0.25 metres deep, sloped to a 152 millimetre diameter stainless steel outlet pipe in the northwest corner of

the trench which discharges to the adjacent Building 311 Courtyard Truck Loading Containment Area;

- one (1) spill containment area, for methanol and DBE pumps, approximately 6.1 metres by 7.1 metres, with a 2.1 metre by 2.3 metre corner cut-out, sharing the west side curb wall with the MeOH Storage Containment, with Building 311 forming the south wall and a new concrete curb, the east wall with a concrete floor sloped to the north to drain to the truck access pad and its collection trench, as described above;

Building 311 North HBR Containment

- one (1) spill containment area, approximately 4.9 metres by 3.7 metres, for the High Boiler Removal (HBR) Condenser Seal Tank, with a concrete floor with a polyurethane based cement aggregate coating, providing approximately 7 cubic metres of containment volume, including:

    - gravity drainage to a grating-covered sump in the northwest corner

    - a 152 millimetre diameter stainless steel drainage line from the sump to the Building 311 Courtyard Truck Loading Containment Area

Building 311 Courtyard Truck Loading Containment

- one (1) spill containment area, approximately 15.5 metres by 10.7 metres, consisting of an entrance at grade level on the west side, a 6.4 metre by 10.7 metre downward sloping concrete ramp and a 9.1 metre by 10.7 metre by 0.61 metre deep containment area with a flat concrete floor, providing an overall containment volume of approximately 38 cubic metres and including:

    - two (2) separate 152 millimetre diameter stainless steel inlet lines on the south side, one (1) from the truck access pad spill collection trench and one (1) from the HBR Tank Containment Area

    with collected storm water discharged via a 102 millimetre diameter HDPE line with a manual valve (normally closed but opened upon prior analysis of containment contents to ensure that discharge objectives are met) at the southeast corner to the Crib Ditch which flows south along "E" Avenue;

- a paved truck access area to the west of the above described spill containment area drained by one (1) catch basin with a storm sewer connection to the Crib Ditch which flows south along "E" Avenue;

Building 417 Containment

- one (1) pump containment area, located south-east of Building 412, approximately 15.2 metres by 3.3 metres, contiguous with the east wall of the concrete containment area providing a containment volume of approximately 617 cubic metres for three (3) storage tanks, Amines products or raw materials

- one (1), 102 millimetre diameter opening with a gate valve (normally closed) in the common wall between the pump containment and the concrete containment area to allow flow to the existing approximately 0.5 cubic metre sump in the south-west corner of the containment area which, in turn, drains by a valved discharge line (normally closed but opened upon prior analysis of contents to ensure discharge objectives are

met) to the south storm water ditch which discharges to the Detention Pond Effluent which is conveyed to the St. Lawrence River;

- one (1) concrete floor/wall containment area, approximately 37.5 metres by 22.3 metres with a containment volume of approximately 1120 cubic metres for two (2) storage tanks containing Amines products or raw materials, contiguous with the north wall of the Bldg 417 containment, connected by a 914 millimetre wide by 406 millimetre deep overflow weir in the common wall, including a concrete floor in the containment sloped to a grating covered trench system along and inside the north, east and south walls, directing drainage to an approximately 1.5 metre square by 0.61 metre deep sump in the southeast corner, with a valved drainage line (normally closed but opened upon prior analysis of contents to ensure discharge objectives are met) to the east storm water ditch which connects with the south storm water ditch and the Detention Pond Effluent which is conveyed to the St. Lawrence River;

B513 Caustic Unloading Sump

- located north of the tracks and west of the HMD Storage area, the containment area previously collected wastewater from around two sodium hydroxide tanks and the truck loading area and drained to an adjacent sump, now modified by installing a drain below-ground, through the wall of the sump, to direct rainwater through crushed stone to a nearby catch basin which empties to the storm water Detention Ponds and then to the combined site effluent.

Hydrogen Plant

- piping to discharge non-contact cooling water

- stainless steel pipe connecting the Flash Tank, north of Building 550, to a manhole on the cooling water return line, to direct condensate and boiler blowdown from the Hydrogen Plant

- piping to direct knockout drum condensate via a surface ditch

Building 547 Drinking Water Treatment

- piping to convey filter backwash, floor drain effluents and water storage tank drainage

Building 116/201 and 141 Powerhouse

- piping to convey non-contact cooling water, boiler blowdown, air compressor condensate drains, Sand Filter reject water, spent ion exchange salt brine and reverse osmosis mineral flushes from the boiler feedwater treatment

Building 605 Administration

- piping to convey floor and roof drainage

Building 120 Water Storage

- piping to discharge water from the elevated storage tank sump pit and for the periodic drainage of the storage tank, as needed for maintenance work

Building 709 Nitrogen Plant

- located at the intersection of "D" Avenue and Seventh Street,

- one (1) stainless steel hub drain, standing approximately 0.25 metres above the concrete slab floor at the north end of the Building, to convey condensate, from the air compressor, at typical summer flow rates of 100 Litres per hour, via a 102 millimetre diameter stainless steel underground pipe north to a rip rap lined discharge area within the existing storm ditch located south of the railway tracks and along Seventh Street;

- one (1) existing storm ditch along Seventh Street, draining to the east to a storm ditch running south along Wells Avenue which then turns to the west near Building 413 to discharge into the Site Crib Ditch;

Building 753, 2-Methylpentamethylenediamine (MPMD) Refining

- piping to convey once through, non-contact cooling water from the MPMD Refining Train heat exchangers at typical rates of 1600 Litres per minute via an underground line to a collection header running south and discharging to the Crib Ditch;

- a run of 254 millimetre diameter PVC pipe, about 11 metres long, connecting with the service water return line, to convey non-contact cooling water, at up to approximately 1600 Litres per minute from MPMD Refining Train heat exchangers to the 254 millimetre diameter drain, north of Building 718, which discharges to the Crib Ditch;

Connection for Engreen Maitland Inc. or successor companies

- underground collection piping to convey cooling water including direct contact cooling water from the former Engineering Polymers facility

Connection for The Chemours Canada Company or successor companies

- underground collection piping to convey non-contact cooling water and process wastewater from the former Fluorochemicals facility

Connection for Evonik Chemicals or successor companies

- a lined open channel ditch conveying non-contact cooling water from the Evonik Chemicals facility and merging with the treated final effluent from the INVISTA Biological Treatment Plant (BTP) facility, with the combined discharge conveyed via ditches and culverts to the #2 and/or #3 Detention Ponds.

MAIN BTP WASTEWATER COLLECTION HEADER

- one (1), 305 millimetre diameter, above-ground, stainless steel, Wastewater Header running to the Anoxic Basin of the Biological Treatment Plant (BTP) with the following tie-ins:

Building 211 Amines Raw Material Storage Area

- one (1) concrete secondary containment facility with a total effective containment volume of approximately 3,500 cubic metres, for two (2), 2,885 cubic metre storage tanks, including a concrete floor, a drainage collection trench, a valve pit, a discharge pit, and a sump pump, discharging via 50 millimetre piping to the Main BTP Wastewater Collection Header;

Building 217/221 Railcar and Trailer loading

- The combined contents from the B217 and B221 floor trenches are pumped via over-ground 51 mm pipe to the B311 sump.

Building 219 Waste Fuel Storage/BTP Feed Equalization

- one (1) containment area with concrete walls and a concrete slab floor, approximately 51.1 metres by 62.4 metres with an overall holding volume of 3160 cubic metres, with intersecting north-south and east-west drainage trenches, to collect and transmit storm water and any process leaks from the one (1) Liquid Waste Fuel Storage Tank, one (1) Biotreatment Plant Feed Equalization Tank and three (3) Utility Tanks contained within, through a pipe at the east end of the east-west trench and an exit valve (normally closed, opened only under supervision) to the adjacent discharge pit

- one (1) reinforced concrete Pump Pad, outside of the above described containment area, with curbing on three sides and a length of the east dyke wall as the fourth side, with a floor area of approximately 62 square metres, sloped to transmit the collected storm water and any process leaks, through openings in the south curb wall to the adjacent discharge pit;

- one (1) reinforced concrete, curbed, Waste Fuels pump pad, outside of the containment area, to provide an overall area of 3.0 metres by 4.9 metres, to collect and transmit pad storm water and any process leaks directly to a sump at the north end which drains through a stainless steel underground pipe, to the adjacent discharge pit;

- one (1) concrete-lined, in-ground discharge pit, outside of the containment area, approximately 5.9 metres by 1.8 metres and 1.8 metres deep, providing a containment volume of approximately 19.7 cubic metres, and including remote level indication and a high level alarm, discharging through a field started discharge pump, to the 100 millimetre diameter stainless steel Amines Process Waste Header Line to the Main BTP Wastewater Header and ultimately to the Biological Treatment Plant.

AMINES AREA

- one (1), 152 millimetre diameter Amines Area Header running from the Building 311 Sump to the 305 millimetre diameter stainless steel (SS) Main BTP Wastewater Header at a point upstream of the Building 211 Sump connection to the Header;

Building 311

- one (1) Bldg 311 Sump, 4 metres by 2.1 metres by 1.8 metres deep, stainless steel lined, located along the south wall of Bldg 311, with two (2) centrifugal pumps, on level control, discharging, through a 152 millimetre diameter above-ground, SS Process Waste Header to the 305 millimetre diameter, above-ground, SS Main BTP Wastewater Header to the Anoxic Basin of the Biological Treatment Plant, the collected process and drainage flows from the following:

    - one (1), 102 millimetre diameter SS header which collects flows from a 51 millimetre diameter pipe, the 25 millimetre diameter, SS, 2-methylpentamethylenediamine (MPMD) sample drain, and the 51 millimetre diameter, SS MPMD sample and floor drain

    - one (1), 203 millimetre diameter, SS sewer connection from the Bldg 311 floor trenches

    - three (3), 51 millimetre diameter SS sewers - the Waste Mix tank (WMT) Eductor effluent, B217 sump pump and the storm water from the Pre-Esterification Containment Area adjacent to Building 311

- one (1), 102 millimetre diameter, above-ground, stainless steel DBE process waste header line from Building 311 to convey flow to the 152 millimetre diameter above-ground, stainless steel Amines Waste Header, downstream of the Building 311 Sump;

- piping to route the Aqua Ammonia Column Tails line from Building 311 to the 152 millimetre Amines Process Header;

- one (1), new,13 millimetre diameter, above-ground, stainless steel High Boiler residue (HBR) tails line tying into the existing 2-methylpentamethylenediamine (MPMD) sample drain and one (1) new 76 millimetre diameter above-ground, carbon steel, MPMD condenser, spent once through non-contact cooling water line, both discharging to the existing Building 311 Sump, which in turn, is pumped via the existing stainless steel Amines Waste Header and the existing stainless steel Main BTP Wastewater Header to the Anoxic Basin of the Downsized Biological Treatment Plant;

- one (1), new, 13 millimetre diameter stainless steel line, tying into the existing stainless steel Amines Waste Header, described above, to deliver a supplemental carbon feed source, as needed, to the Anoxic Basin

- all other controls, electrical equipment, instrumentation, piping, pumps, valves, and appurtenances

essential for the proper operation of the aforementioned sewage works;

DBE Production Pre-Esterifier Containment Area

- a diked, L-shaped Pre-Esterifier Containment Area, adjacent to Bldg. 311, with a reinforced concrete floor and approximately 0.6 metre high concrete walls, providing a containment volume of approximately 63 cubic metres, collecting and transmitting storm water drainage to a concrete sump located in one corner of the containment area discharging through an approximately 50 millimetre diameter drain line with a manually operated guard valve (normally closed, opened only on an as needed basis under supervision) to the Bldg. 311 Sump, which in turn is pumped via the Amines Waste Header to the Biological Treatment Plant;

Fluorochemicals Effluent Sump

- one (1), 2 cubic metre capacity, stainless steel lined manhole, located in the Amines Area, collecting effluent from the one (1)**,** 76 millimetre and one (1), 152 millimetre diameter Central Laboratory and the former Fluorochemicals Area sewers, respectively, and from the Bldg 311 South West Containment and the Bldg 311 South-East Tank Farm, with discharge by means of a level control system and a pump, to the Amines Header and thus to the 305 millimetre diameter, above-ground SS Main BTP Wastewater Collection Header running to the Anoxic Basin of the Biological Treatment Plant;

Building 311 - South-west Tank Containment

- one (1) concrete slab floor with a polyurethane based cement aggregate coating, to provide approximately 117 cubic metres of containment volume with drainage via a new 0.25 cubic metre concrete sump in the southeast corner and a 152 millimetre diameter High Density Polyethylene (HDPE) outlet line with a valve (normally closed) to the Fluorochemicals Sump, which is pumped on level control via the Amines Header to the Biological Treatment Plant;

- one (1) 152 millimetre diameter HDPE overflow line through the east wall of the 3MP dyke at an invert elevation of 89.6 metres, tied into the 152 millimetre diameter sump outlet line described above;

Building 311 - South-east Tank Farm Containment

- one (1) polyurethane based cement aggregate coated floor over asphalt in the 49.4 metre by 13.4 metre dyked area which together with a smaller 13.4 metre by 7.0 metre contiguous area provides approximately 177 cubic metres of containment volume including a 0.9 cubic metre concrete sump inside at the south-west end, and a 152 millimetre diameter HDPE outlet line with a valve (normally closed) to direct storm drainage to the Fluorochemicals Sump;

- one (1) 152 millimetre diameter HDPE overflow line through the south dyke at an invert elevation of 88.5 metres, tied into the 152 millimetre outlet line from the concrete sump to the Fluorochemicals Sump;

Central Laboratory

- collection of contaminated sink water from the Laboratory which gravity drains via a 102 millimetre pipe to the 152 millimetre line from the former Fluorochemicals area flowing to the Fluorochemicals Sump located in the Amines Area;

Building 412 Sump

- one (1) Bldg 4l2 Sump, 2.4 metres in diameter and 3.0 metres deep, stainless steel (SS) lined with a removable SS cover, located east of Bldg 412, with one (1), centrifugal pump discharging, via a 102 millimetre diameter, above-ground, SS, Building 412 Process Waste Header, to the 152 millimetre diameter, above-ground, SS Amines Process Waste Header line south of Bldg 311, which connects with the 305 millimetre diameter, above-ground, SS, Main BTP Wastewater Collection Header to the Anoxic Basin, the collected process and drainage flows from the following:

    - one (1) 406 millimetre diameter ductile iron collection pipe acting as a header for two (2), 203 millimetre diameter ductile iron sewers collecting flows from Bldg 412/414 floor trenches and floor drains

    - one (1), 76 millimetre diameter carbon steel Refiner Hotwell Squelcher in Building 413

Building 413 Sump

- one (1), 5l millimetre diameter above-ground, carbon steel pipe from Bldg 413, tying-in to the 102 millimetre diameter, above-ground, Bldg 412 Header, downstream of the Bldg 412 Sump discharge;

- one (1) Building 413 Sump with a volume of approximately 0.6 cubic metres, including a pump, collecting Building 413 floor trench effluents with discharge via a 51 millimetre diameter Building 413 Header.

- one (1), 13 millimetre diameter above-ground, carbon steel pipe from the Refiner Hotwell and one (1) 38 millimetre diameter carbon steel pipe from the BS Kettle Hotwell, each tying-in to the 51 millimetre diameter Building 413 Header, downstream of the Bldg 413 Sump discharge.

B513 HMD Storage and Loading Sump

- one (1) spill containment works, for three (3) Storage tanks, measuring approximately 10.7 metres by 28 metres by 1.5 metres to provide an approximate containment volume of 374 cubic metres, with channel drains connected through a drain line and valve to a grating-covered concrete sump;

- railcar metal spill pans along approximately 30.5 metres of railway track at the HMD loading area, with cross drains connected to the concrete sump described above;

- one (1) concreate sump, with an approximate capacity of 22 cubic metres, located outside the south-west wall of the above spill containment, with a sump pump discharging wastewater containing HMD from the railcar loading vent eductor system, railcar spill pans and the spill containment works to the BTP via

overhead Amine Area Header.

BTP North Collection Header

- one (1) underground line, the North Collection Header, to the Anoxic Basin conveying wastewater from:

  - the MPMD North Refining facilities including the pumped floor trench and sump system wastewater in Building 753

  - Sewer from the former Engineering Polymers operation, currently not in use.

  - the Evonik Chemicals Hydrogen Peroxide Plant, truck loading/unloading area curbed containment works and sump

Building 753 - 2-Methylpentamethylenediamine (MPMD) Refining

- one (1) existing concrete containment area, at the south wall of Building 753, for the Dehydrator and Purifier Columns, approximately 6.8 metres by 3.6 metres, with a curb height of 0.20 to 0.25 metres above a sloping concrete floor, directing storm water to a concrete-lined collection trench within the curbed area, at the north curb;

- one (1) existing tar buggy concrete slab, approximately 4.7 metres by 4.9 metres, abutting part of the Dehydrator/Purifier containment area, with an open west side for buggy access and curbing on the remaining three sides varying in height from 0.05 to 0.2 metres relative to the sloping floor, directing storm water to a 0.09 square metre corner sump, connected by a 102 millimetre diameter pipe to a Collection Trench;

- one (1), 203 millimetre diameter pipe connecting the floor trench in Building 753 with the Collection Trench;

- one (1) existing concrete-lined Collection Trench, approximately 0.8 metres by 4.3 metres, with a galvanized grating cover and sloping floor providing a maximum depth of 1.3 metres, located within the Dehydrator/Purifier containment area;

- one (1) existing centrifugal pump in Building 753, with a manual start, a high level alarm and an automatic shutdown on low level, to pump intermittently at up to 4560 Litres per hour, of drainage from the Collection Trench via the 25.4 millimetre diameter stainless steel overhead line which ties into a manhole north of the 203 mm diameter underground line which discharges wastewater (including also Engineering Polymers Area Wastewater) to the Anoxic Basin;

MPMD Refining Sewage Works

- piping to convey non-condensable gases from the new MPMD refining train consisting of Dehydrator and Purifier Columns to a Packed Column Water Scrubber;

- one (1) liquid ring vacuum pump for the refining train, with process vapours discharging to the Packed

Column Water Scrubber running with the water flow typically in the range of 340 to 1360 Litres per hour typically containing diamine, 3-methylpiperidine (3-MP) and nitrile impurities, discharging via a 25.4 millimetre line which ties into a manhole north of the 203 millimetre diameter sewer to the Anoxic Basin;

- one (1) counter current Water Scrubber for removal of mainly 3-methylpiperidine (3-MP) and ammonia, consisting of a Pall Ring packed section, approximately 1.83 metres long by 0.21 metres in diameter, with water flow in the range of approximately 200 to 1360 Litres per hour via a top spray nozzle and discharge via a bottom outlet to a 25.4 millimetre line which ties into a manhole north of the existing 203 millimetre diameter sewer to the Anoxic Basin;

- a run of 25.4 millimetre diameter stainless steel line to convey up to approximately 2700 Litres per hour of scrubber effluent, including discharge from the liquid ring vacuum pump to the main 25.4 millimetre diameter stainless steel overhead line which ties into a manhole north of the 203 millimetre diameter underground line which discharges wastewater (including also Engineering Polymers Area wastewater) to the Anoxic Basin;

- one (1), 203 millimetre diameter sewer for conveying process wastewater from the Building 753 complex to the Anoxic Basin;

TREATMENT SYSTEMS

Biological Treatment Plant (BTP)

- wastewater collection, transmission, and treatment facilities, designed to biologically treat approximately 2000 kilograms per day of Total Organic Carbon (TOC) and 1200 kilograms per day of Total Nitrogen (TN), at an average feed flow of approximately 720 cubic metres per day, in the existing Anoxic Basin, reconfigured as follows and including:

    - one (1) Anoxic Basin area of approximately 43 meters by 33 metres by 6 metres deep, with an approximate volume of 5740 cubic metres, including up to three (3), 19 kw floating mixers secured by cables to onshore mooring blocks and one (1) 30 kw floating aerator occupying approximately the southern third of the former Anoxic Basin

    - one(1) dividing curtain separating the Anoxic and Aerobic Basins with a flow-through window

    - one(1) Aerobic Basin Area, approximately 43 metres by 61 metres by 6 metres deep, with an approximate volume of 10660 cubic metres, serviced with a fine bubble aeration system, occupying approximately the northern two thirds of the former Anoxic Basin

    - fine bubble diffuser system at a standard oxygen rating of 764 kg/hour consisting of 10 aeration chains laid out east to west across the basin, 11 diffusers per aeration chain, suspended in the basin, and 5 tubes per diffuser

    - up to three (3) blowers able to deliver to the 155 standard cubic meters per minute design capacity of the air

diffuser system

- a concrete outlet structure on the east side of the Aerobic Basin, near the north-east corner, with an adjustable inlet weir, automatic gate valve on the outlet and a 406 millimetre diameter HDPE outlet sewer running south to connect with the existing underground inlet to the to the existing air flotation unit

- one (1) approximately 18 metre diameter steel tank dissolved air flotation unit (Flotator) with a 3.4 metre deep sidewall with central column for air-saturated recycle release into the tank and rotating skimmer arms conveying collected float sludge to three (3) scum boxes connected to an underground sludge recycle pit, with the clarified underflow passed into a circumferential launder box feeding the Dual Media Filter

- up to three (3) air compressors, an air retention tank and two (2) air-saturated water recycle pumps.

- one (1) recycle line from the Flotator effluent tied into the upper sludge return to the Anoxic Basin or to the spare former Aerobic Basin

- one (1) heat exchanger on the Flotator recycle line with piping to direct condensate to the sludge recycle pit

- one (1) approximately 8 metre diameter, 3.4 metre high, downward flow Dual Media Filter with a filter feed splitter box, three (3) filtration compartments with sand/anthracite media , automatic backwashing facilities and two (2) filter feed pumps and a filtrate collection tank on top with an overflow weir to convey the filtrate to the effluent sewer system and the BTP discharge manhole, and hence via Control point 0300 to the #2 and/or #3 Detention Ponds

- one (1) partitioned sludge and filter backwash collection pit receiving sludge from the DAF Unit and Dual Media Filter backwash including two (2) pumps to return sludge to the Anoxic and one (1) pump to feed sludge solution to the Sludge Dewatering Process, with piping to direct an overflow of the pit to Manhole MH#1

- one (1) polymer addition facility for the Biological Treatment Plant with a 7.5 cubic metre storage tank complete with a metering pump, and with addition of polymer to the Flotator via the Flotator feed line at Manhole MH#8;

- one (1) phosphoric acid addition facility for the Biological Treatment Plant, with a 9.1 cubic metre storage tank and an unloading pad with a 0.425 cubic metre sump, complete with a metering pump to add phosphoric acid to the dewatering press filtrate return line to the Main BTP Wastewater Collection Header;

- piping from Building 517 conveying the dual media filter effluent to Manhole MH#1, which is the 0300 Control Point;

- one (1) 610 millimetre diameter HDPE sewer line, running along the south side of Building 517 from Manhole MH#1 at the south-west corner of the building, east via downstream Manhole MH#2 to Manhole

MH#3, and then south-east to a ditch which drains via a 1219 millimetre diameter corrugated steel pipe under the railway siding to Building 211 and hence to Detention Ponds #2 and #3;

- former Aerobic Basin approximately 140 metres by 92 metres by 6 metres deep, with an approximate volume of 77,300 cubic metres. To be used as a spare basin to direct treated wastewater that does not meet effluent criteria, using existing piping, and then reintroduce it into the BTP for further treatment when conditions are favourable.

Biological Treatment Plant Sludge Dewatering

- one (1), 18.2 cubic metre ferric chloride solution tank with a metering pump with a maximum rate of 114 Litres per hour;

- one (1), 25.7 cubic metre blending tank with an agitator to mix dry bulking agents with flotator supernatant including a discharge pump to feed the blended slurry to a reaction tank for further blending with flotator sludge and metered dewatering agents;

- one (1) polymer addition facility for dewatering biosolids consisting of a 0.4 cubic metre polymer storage tank and a metering pump rated at 7.8 Litres per hour to feed polymer solution to the reaction tank;

- one (1), 1.1 cubic metre reaction tank with an agitator and transmission of blended sludge to a thickened sludge holding tank having a capacity of approximately 58.7 cubic metres, which discharges the slurry via two (2) pumps, each rated at approximately 34.1 cubic metres per hour; to the membrane filter press;

- one (1) membrane dewatering filter press for bio-solids with up to 120 filtration chambers, each 1.5 metres by 1.5 metres, and a maximum filtration area of 418 square metres, with filtrate conveyed via ports in the plates to the filtrate tank;

- one (1), 2.3 cubic metre filtrate tank, with two (2) pumps each rated at 45.4 cubic metres per hour, discharging filtrate via a 100 millimetre diameter pipe to the Main BTP Wastewater Collection Header discharging to the Anoxic Basin;

- one (1) tank truck unloading area containment drain directed to the filtrate tank;

Detention Ponds

- three (3) Detention Ponds, #1,#2 and #3 positioned from east to west, in the south-western part of the Site, operating in parallel to collect the Crib Ditch discharge and the effluent from the Biological Treatment Plant with respective operating volumes of approximately 6100, 2500 and 2500 cubic metres and including in each Pond:

    - skimmers along the discharge side with skimmed material being routed to either of two concrete pits from which supernatant can be returned to the Ponds and from which solid material may be removed for authorized disposal

- a central weir for conveying effluent to a discharge ditch with the three (3) separate ditch sections combining into one ditch which runs south through a culvert under County Road #2 and then south-east to the Plant Outfall structure and from there via Control Point 1100 and the twin outfall pipes, to the St. Lawrence River;

Sanitary Treatment Plant (STP)

- a site-wide sanitary sewer system conveying sanitary sewage to the North-east Manhole located north-east of the Sanitary Wastewater Treatment Plant (STP), including an outlet via a 254 millimetre PVC pipe to the STP and a 254 millimetre diameter vitrified clay sewer with a normally closed valve connecting to an emergency concrete Holding Tank;

- one (1) prefabricated, carbon steel, packaged STP, located north of the #1 Detention Pond, providing extended aeration activated sludge treatment for a maximum design flow of 378 cubic metres per day of up to 250 milligram per Litre BOD5 wastewater including the following units in treatment sequence:

  - one (1), 12.1 cubic metre influent pump tank equipped with a comminutor
  - one(1), 378.3 cubic metre aeration tank, and
  - one (1), 63.2 cubic metre clarifier tank
  - one (1), 85.5 cubic metre aerated sludge holding tank

  operated with the feed conveyed via a comminutor to the influent pump tank, with two (2) pumps conveying the wastewater to the contiguous aeration tank with overflow via a baffled inlet port to the contiguous double cone-bottomed clarifier, with a sludge air lift pump to return collected sludge to the head end of the aeration tank or the aerated sludge holding tank, as needed, and the clarified overflow from the discharge conveyed over a weir trough into a flow measurement box with a 90 degree V-notch weir and ultrasonic water level measurement, and then via sections of 254 millimetre diameter PVC and vitrified clay sewer to the Chlorinator Building;

- one (1), 11.3 cubic metre concrete chlorination contact tank, with discharge via a 254 millimetre diameter vitrified clay and PVC pipe sewer system to a manhole to the south which outlets via a 406 millimetre diameter steel pipe to the Site Crib Ditch outlet which also conveys the Site treated wastewater and cooling water to the Dechlorination Building, where the STP effluent is dechlorinated as part of the combined effluent and the total flow is discharged to the St. Lawrence River via MISA Control Point 1100;

- two (2), timer controlled, positive displacement blowers, each capable of delivering up to 11.3 cubic metres of air per minute at 27.6 kilopascals, connected by a 102 millimetre diameter steel pipe and a shut-off valve to the 102 millimetre diameter steel air manifold which runs the length of the STP Unit, feeding an array of 30 stainless steel diffuser drop legs, attached in pairs on either side of the manifold and equally spaced along the manifold, with three pairs in the equalization/sludge holding tank and 12 pairs in the aeration tank, to deliver air to the tanks via bottom mounted diffuser heads on each drop leg;

- one (1) emergency concrete Holding Tank with a capacity of approximately 73 cubic metres connected via a valve controlled sewer with the North-east Manhole.

OUTFALL

- a concrete outfall structure at the shoreline of the St. Lawrence River to convey wastewater and storm water run-off from the Site, consisting of an concrete collection structure and two (2), 1.2 metre diameter high density polyethylene pipes, each with a manual shut-off valve at the structure, extending approximately 128 metres and 107 metres, respectively, into the St. Lawrence River along the bottom;

all other controls, electrical equipment, instrumentation, piping, pumps, valves, and appurtenances essential for the proper operation of the aforementioned sewage works,

all in accordance with the submitted supporting documents listed in Schedule A.

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;

"C" means continuously with an on-line monitor, or in the case of failure or unavailability of an on-line monitor:

- for temperature measurement, at a grab sample frequency of three times per twelve hours with at least three hours between successive samples with immediate analysis performed in the field for each grab sample, and

- for Total Residual Chlorine measurement, at a grab sample frequency of three times over the daily 12 hour Plant Day Shift, with at least three hours between successive samples with immediate analysis performed in the field for each grab sample.

"District Manager" means the District Manager of the appropriate local District Office of the Ministry, where the Works are geographically located;

"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;

"Limited Operational Flexibility" (LOF) means any modifications that the Owner is permitted to make to the Works under this Approval (Schedule B);

"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;

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

"Owner" means INVISTA (Canada) Company, and its successors and assignees;

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

"Regional Director" means the Regional Director of the Eastern Region of the Ministry; and

"Works" means the sewage works described in the Owner's application, and this Approval.

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, and the application for approval of the Works.

3. Where there is a conflict between a provision of any document in the schedule 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 documents in the schedule, the document bearing the most recent date shall prevail.

4. Where there is a conflict between the documents listed in the Schedule submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document 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. The issuance of, and compliance with the conditions of, this Approval does not:

    a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation, or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority necessary to

construct or operate the sewage works; or

b. limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.

2. CHANGE OF OWNER

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

   a. change of Owner;

   b. change of address of the Owner;

   c. change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act,* R.S.O. 1990, c.B17 shall be included in change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the *Corporations Information Act,* R.S.O. 1990, c. C39 shall be included in the notification to the District Manager.

2. In the event of any change in ownership of the Works, other than a change to a successor municipality, 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 and the Director.

3. CHANGES IN PROCESSES OR PROCESS MATERIALS

1. The Owner shall give written notice to the District Manager of any plans to change the processes or process materials in the Owner's enterprise serviced by the Works where the change may significantly alter the quantity or quality of the influent to or effluent from the Works, and no such change(s) shall be made unless with the written concurrence of the District Manager.

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 use best effort to immediately identify and clean-up any spills associated with operation of the Works.

5. OPERATIONS MANUAL

1. The Owner shall maintain an operations manual of operation of the Works, that includes, but not necessarily limited to, the following information:

    a. operating procedures for routine operation of the Works;

    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. contingency plans and procedures for dealing with potential spill, bypasses, and any other abnormal situations and for notifying the District Manager; and

    e. complaint procedures for receiving and responding to public complaints.

2. The Owner shall maintain the operations manual up to date through revisions undertaken from time to time and retain a copy at the location of the sewage works. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.

6. EFFLUENT OBJECTIVES

1. The Owner shall use best efforts to design, construct and operate the works with the objective that the concentration of Total Residual Chlorine (TRC) in the Site Combined Effluent, as measured at the Outfall Structure by an on-line TRC monitor, prior to discharge to the St. Lawrence River, does not exceed 0.035 milligrams per Litre at all times.

2. The Owner shall use best efforts to design, construct and operate the works with the objective that the Site Combined Effluent meets the lesser 24 hour daily average temperature, based on both objectives of final temperature and temperature difference with respect to the inlet water temperature, as set out in the table below, for the specific seasonal periods stated, and as measured at the Intake Pump Inlet and Control Point 1100, respectively:

   a. **Site Combined Effluent** - at Control Point 1100 prior to discharge to the St. Lawrence River via the Outfall Structure:

Table 1 - Site Effluent Temperature Objectives		
Effluent Parameter	**Calendar Period**	**Effluent Objectives (24 Hour Daily Avg.)**
Maximum Effluent Temperature	January 1 to June 30 **&** October 1 to December 31. July 1 to September 30	30 degrees Celsius 35 degrees Celsius
Maximum Temperature Rise (Effluent minus Intake Temperature)	January 1 to June 30 **&** October 1 to December 31. July 1 to September 30	17 Celsius degrees 12 Celsius degrees

3. The Owner shall use best efforts to design, construct and operate the works with the objective that the concentrations of the effluent parameters named in the Table 2 are not exceeded in the effluent from the STP:

   a. **STP Effluent** - prior to discharge to the Crib Ditch

Table 2 - STP Effluent Objectives	
Effluent Parameters	**Concentration Objectives**
$CBOD_5$	15 mg/L
Total Phosphorus	0.5 mg/L
Total Suspended Solids	15 mg/L
Escherichia coli (E. coli)	200 Colony Forming Units/100 ml.*

*** mean calculated as a geometric mean of 5 samples**

4. The Owner shall at all times chlorinate the effluent from the STP.

5. The Owner shall include in all reports submitted in accordance with condition 11 (Reporting Condition) a summary of the efforts made and results achieved under this condition.

6. The Owner shall use best efforts to design, construct and operate the works with the objective

that the concentrations of the effluent parameters named in Table 3 are not exceeded in the effluent from the BTP:

a. **BTP Effluent** - at Control Point 0300, prior to discharge to the ditch system to Detention Ponds #2 and #3:

Table 3 - BTP Effluent Objectives	
Effluent Parameters	**BTP Effluent Objectives**
Ammonia	0.8 mg/l
Nitrate + Nitrite	82 mg/l
DOC	75 mg/l
Phosphorus	1 mg/l

7. EFFLUENT LIMITS

1. The Owner shall design, construct, and operate the Works such that for the Site Combined Effluent, the concentration of Total Residual Chlorine does not exceed the concentration limit shown in Column 2 of Table 4.

   a. **Site Combined Effluent** - at the Site Outfall Structure downstream of Control Point 1100, prior to discharge to the St. Lawrence River:

Table 4 - Site Effluent Limits	
Effluent Parameters	**Concentration Limit (mg/L)**
Column 1	Column 2
Total Residual Chlorine (TRC)	0.01

2. The Owner shall design, construct, and operate the works such that the concentrations and loadings of the effluent parameters in the effluent from the STP named below do not exceed their concentration and loading limits shown in Columns 2 and 3 of Table 5, respectively:

   a. **STP Effluent** - prior to discharge to the Crib Ditch:

Table 5 - STP Effluent Limits		
Effluent Parameters	**Concentration Limit (mg/L)**	**Loading Limit (kg/day)**
Column 1	Column 2	Column 3
CBOD5	25	9.45
Total Phosphorus	1	0.38
Total Suspended Solids	25	9.45

3. For the purposes of determining compliance with and enforcing subsections (1) and (2):

a. non-compliance with respect to a Concentration Limit is deemed to have occurred when any single grab or composite sample analyzed for a parameter listed in Column 1 of the Tables in subsections (1) and (2) is greater than the corresponding maximum concentration set out in Column 2 of the above Tables.

b. non-compliance with respect to a Loading Limit is deemed to have occurred when the product of the concentration of any single grab or composite sample, analyzed for a parameter listed in Column 1 of Table 5 in subsection (2) and the daily flow at the designated sampling point, in the appropriate units, is greater than the corresponding maximum Loading Limit set out in Column 3 of Table 5.

4. The Owner shall design, construct, and operate the Works such that, for the BTP Effluent at Control Point 0300, the loadings for the effluent parameters named in Column 1 of Table below do not exceed the loading limits shown in Columns 2 and 3 of Table 6, respectively:

a. **BTP Effluent** - at Control Point 0300, prior to discharge to the ditch system to Detention Ponds #2 and #3:

Table 6 - BTP Effluent Limits

Effluent Parameter	Monthly Average Concentration Limit (mg/L)	Monthly Average Loading Limit (kg/day)
Column 1	Column 2	Column 3
DOC	95	69
TKN	26	19
Ammonia +Ammonium	5	3.5
Nitrates+ Nitrites	130	94
Phosphorus	1.5	1.1
TSS	29	21
Oil and Grease	10	7
Copper	0.14	0.098

b. Written notification to the District Manager is required prior to the commencement of HMD production and will result in the suspension of the Limits in Table 6 for a period of ninety (90) days. Following the ninety (90) day acclimation period, Table 6 - BTP Effluent Limits will apply.

c. Limited operation of HMD assets for the purpose of commissioning and product verification are excluded from the requirement in 7.4.b for a period of 14 days. The District Manager shall be notified at the start of this period.

d. Crude HMD production shall occur for up to 14 days at 55% production rate prior to the start of HMD Refining.

5. For the purposes of determining non-compliance with and enforcing Subsection (4)

   a. non-compliance with respect to a Daily Loading Limit is deemed to have occurred when the calculated daily loading discharged as the product of the concentration of any single grab or composite sample, analyzed for a parameter listed in Column 1 of Table 6 in Subsection (1) and the daily flow at the designated sampling point, in the appropriate units, is greater than the corresponding Daily Loading Limit for that parameter set out in Column 2 of Table 6.

   b. non-compliance with respect to a Monthly Average Loading Limit is deemed to have occurred when for the month, for a parameter listed in Column 1 of Table 6 in Subsection (1), the sum of all of the individual calculated loading discharges during the month for that parameter, divided by the total number of samples, in the appropriate units, is greater than the corresponding Monthly Average Loading Limit for that parameter, set out in Column 3 of Table 6.

8. EFFLUENT - VISUAL AND OLFACTORY OBSERVATIONS

1. 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 noticeable odour and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen, foam, or discolouration on the receiving waters.

9. SAMPLES AND MEASUREMENTS

1. The Owner shall ensure that all 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 designated stream over the time period being monitored.

10. EFFLUENT MONITORING

Except for an allowed design and installation period for the on-line TRC Monitor of 180 days from the issue date of this Approval, the Owner shall establish and carry out, within 60 days of the issue date of this Approval, the following effluent monitoring program:

1. The streams named below shall be sampled at the sampling points named below, in accordance with the monitoring frequency and sample type specified for each parameter named below, and the samples analyzed for the stated parameter, unless otherwise required in writing by this Approval or by the District Manager:

   a. **Site Combined Effluent** - at the Site Outfall Structure prior to discharge to the St. Lawrence River except for temperature which is measured at Control Point 1100:

Table 7 - Effluent Monitoring		
Effluent Parameters	**Monitoring Frequency**	**Sample Type**
Total Residual Chlorine (TRC)	C	On-line
Total Residual Chlorine (TRC)	W	Grab
Temperature*	C	On-line
Copper	M	Composite
Sodium	M	Composite
Chloride	M	Composite

*** measured on-line at Control point 1100**

   b. **Site Intake Water** - sampled at the inlet to the raw water intake pumps:

Table 8 - Intake Water Monitoring		
Effluent Parameter	**Monitoring Frequency**	**Sample Type**
Temperature	C	On-line

c. **Feed to STP** - prior to the Comminutor:

Table 9 - STP Feed Monitoring			
Analytical Test Group*	**Influent Parameter**	**Monitoring Frequency**	**Sample Type**
5a	DOC	M	Grab
6	Total Phosphorus	M	Grab
8	Total Suspended Solids	M	Grab

*** Analytical Test Group as listed in the document referenced in Subsection 2 (a) below**

d. **STP Effluent** - after chlorination and prior to discharge to the Crib Ditch

Table 10 - STP Effluent Monitoring			
Analytical Test Group*	**Effluent Parameter**	**Monitoring Frequency**	**Sample Type**
1b	CBOD5	W	Composite
3	Hydrogen Ion (pH)	W	Grab
4a	Total Ammonia	W	Composite
5a	DOC	W	Composite
6	Total Phosphorus	W	Composite
8	Total Suspended Solids	W	Composite
31	Total Residual Chlorine	C	On-line
35	E. Coli	W	Grab

*** Analytical Test Group as listed in the document referenced in Subsection 2 (a) below**

e. **BTP Effluent** - at Control Point 0300, prior to discharge to the ditch system to Detention Ponds #2 and #3:

Table 11 - Effluent Monitoring		
Effluent Parameters	**Sampling Frequency**	**Sample Type**
Total Ammonia	W	Composite
Nitrate + Nitrite	W	Composite
Total Kjeldahl Nitrogen	D	Composite
Dissolved Organic Carbon	D	Composite
Total Phosphorus	W	Composite
Copper	W	Composite
Total Suspended Solids	D	Composite
Oil and Grease	W	Composite
Hydrogen ion (pH)	C	On-line
Acute Lethality with Rainbow trout and *Daphnia magna*	Q*	Grab

f. **Nitrogen Plant Condensate** - Nitrogen Plant air compressor condensate at the drain hub:

Effluent Parameter	Monitoring Frequency	SAMPLE TYPE
Oil and Grease	Q	Grab

2. 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. the Ministry 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

c. the Environment Canada publications, "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" and "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* , both dated July 1990.

3. The Owner shall ensure that the accuracy of the temperature measurements required under this section, is within plus or minus 0.5 Celsius degrees.

4. The Owner shall use best efforts to ensure to the extent possible that the samples required under subsections 1.a., 1.c., and 1.d., are all picked up on the same day.

5. The Owner shall use best efforts to ensure to the extent possible that the samples required to be picked up at the quarterly, "Q", sampling frequency under subsection 1.e., are picked up on the same day as the weekly, "W", sampling frequency samples under subsection 1.e.

6. Continuous flow measuring devices shall be installed and maintained to measure the flowrate of the STP Effluent, BTP Effluent and the Combined Site Effluent with respective accuracies to within plus or minus 15 per cent, 15 per cent and 20 percent of the actual flowrate for the entire design range of the flow measuring device and the Owner shall measure and record the flowrates of the three (3) effluents for each day.

7. After **six (6) months** of monitoring in accordance with this Condition, the monitoring frequencies specified in subsections 1.c., and 1.d., may be modified by the Director in writing, from time to time.

8. After **twenty-four (24) months** of effluent monitoring under subsection 1.f., the Director may modify or eliminate the monitoring requirements under subsection 1.f., upon the written request of the Owner, which shall also include the monitoring results from the twenty-four (24) month period.

9. The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

11. REPORTING

1. The Owner shall report to the District Manager or designate, any exceedance of any parameter specified under conditions 7, orally, as soon as reasonably possible, and in writing within seven (7) days of the first oral report of the exceedance.

2. In addition to the obligations under Part X of the EPA, the Owner shall, submit within 10 working days of the occurrence of any reportable spill as defined by Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, from the herein approved works, a full written report of the occurrence to the District Manager describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventive measures to be taken and a schedule of their implementation.

3. The Owner shall prepare and submit a quarterly performance report to the District Manager within **forty-five (45) days** following the end of each calendar quarter. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data collected under the requirements of Conditions 9 and 10 and a comparison to the effluent objectives and limits outlined in Conditions 6 and 7, including an overview of the success and adequacy of the sewage works and specifically listing all exceedances of the temperature objectives

(b) a description of any operating problems encountered and corrective actions taken, including a summary of the unavailability, in hours, of required on-line monitoring instrumentation

(c) a summary of major maintenance carried out on any major structure, equipment, apparatus, or mechanism forming part of the sewage works

(d) a summary of any laboratory effluent quality assurance or control measures undertaken in the reporting period

(e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment

(f) a description of efforts made and results achieved in meeting the Effluent Objectives of condition 6

(g) the results of the acute lethality testing

(h) daily average and monthly minimum, maximum and average wastewater feed flow to the BTP

(i) the daily average BTP feed wastewater strength in terms of the concentrations of DOC, Total Ammonia, TKN, Nitrate/Nitrite and Total Phosphorus

(j) all daily effluent monitoring analytical data and effluent flow, as required by conditions 10.1, in terms of concentrations and loadings along with monthly averages, minima and maxima

k) key BTP operating parameters and their ranges, i.e. pH, dissolved oxygen concentration, basin temperature, mixed liquor suspended solids concentration, sludge age, hold-up time and sludge viability from microscopic examination

(l) an overview of the success and adequacy of the sewage works

(m) a description of any operating problems encountered, and corrective actions taken

(n) any other information the District Manager requires from time to time.

4. Six (6) months after providing notification to the District Manager as required in Condition 7.4.b., a wastewater characterization report will be submitted to the Ministry to assess whether (1) the list of regulated parameters is appropriate and (2) the current objectives and limits are appropriate. The finalized list of assessed parameters is to be developed through consultation with Regional Technical Support.

12. LIMITED OPERATIONAL FLEXIBILITY (LOF)

(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 D of this Approval, as amended.

(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, that the Works, 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 <u>not</u> 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 may adversely affect the approved effluent quality criteria or the location of the discharge/outfall;

(c) Modifications to the treatment process technology of the Works, or modifications that involve construction of new reactors (tanks) or alter the treatment train process design;

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

(e) 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 modification 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 the District Manager has provided written acceptance of the Notice of Modifications or a minimum of thirty (30) days have passed since the day the District Manager acknowledged the receipt of the Notice of Modifications.

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

1. Condition 1 is imposed to ensure that the Works are constructed and operated in the manner in which they were described 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. Condition 1.6 is included to emphasize that the issuance of this Approval does not diminish any other statutory and regulatory obligations to which the Owner is subject in the construction, maintenance, and operation of the Works. The Condition specifically highlights the need to obtain any necessary conservation authority approvals. The Condition also emphasizes the fact that this Approval does not limit the authority of the Ministry to require further information.

2. Condition 2 is included to ensure that the Ministry records are kept accurate and current with respect to the 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.

3. Condition 3 is included to ensure that the Works are operated in accordance with the information submitted by the Owner relating to the process and materials which are served by the Works, and to ensure that any contemplated changes in them which could potentially affect the characteristics of effluent from the Works will be properly reviewed and approved.

4. Condition 4 is included to ensure that the Works will be operated, maintained, and equipped in a manner enabling compliance with the terms and conditions of this Approval, such that the environment is protected.

5. Condition 5 is included to ensure that a comprehensive 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, in proper plant operation 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.

6. Condition 6 is imposed to establish non-enforceable effluent quality objectives which the Owner is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment

occurs and before the compliance limits of Condition 8 are exceeded.

7. Conditions 7 and 8 are imposed to ensure that the effluent discharged from the Works to the St. Lawrence River meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver and to protect water quality, fish, and other aquatic life in the receiving water body.

8. Condition 9 and 10 are included to require the Owner to demonstrate on a continual basis that the quality and quantity of the effluent from the approved Works is consistent with the design objectives and effluent limits specified in the Approval and that the approved Works do not cause any impairment to the receiving watercourse.

9. Condition 11 is included to provide a performance record for future references and to ensure that the Ministry is made aware of problems as they arise, so that the Ministry can work with the Owner in resolving the problems in a timely manner.

10. Condition 12 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. This Condition is 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 provides assurance that the proposed modifications comply with the Ministry's requirements stipulated in the Terms and Conditions of this Approval, Ministry's policies, guidelines, and industry engineering standards and best management practices.

SCHEDULE 'A'

1. Environmental Compliance Approval Application for Industrial Sewage Works signed by Matthew Murton, INVISTA (Canada) Company, dated July 22, 2024 and all supporting documentation and information.

SCHEDULE 'B'

Schedule B - MISA Revocation

This Schedule is to provide for the substantially equivalent requirements that were set out in Ontario Regulation 63/95 as it read prior to its revocation on July 1, 2021 such that there is a continued protection of the environment. This Schedule forms part of this Approval.

This Schedule applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

This Schedule shall come into force on the day it is issued.

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

1. "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;

2. "Discharger" means **INVISTA (Canada) Company** or person in occupation or having the charge, management or control of ***INVISTA COMPANY (Maitland)*** , the Plant to which this Approval applies;

3. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Plant is geographically located;

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

5. "Limited Parameter", means a parameter for which a limit is specified in this Approval;

6. "Merged Effluent Monitoring Stream" means a stream on which a sampling point is maintained as referenced under Condition 3(2);

7. "Merged Effluent Sampling Point" means a sampling point maintained as referenced under Condition 3(2);

8. "Merged Parameter", means a parameter that is listed in this Approval in the Table titled "Merged Effluent Parameter" in **Schedule C**;

9. "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;

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

11. "Pick Up", in relation to a sample, means pick up for the purpose of storage, including storage within an

automatic sampling device, and transportation to and analysis at a laboratory;

12. "Plant" means the industrial facility and the developed property, waste disposal sites and wastewater treatment facilities associated with it;

13. "Process Change" means a change in equipment, production processes, Process Materials or treatment processes;

14. "Process Effluent Monitoring Stream" means a stream on which a sampling point is maintained as referenced under Condition 3(1);

15. "Process Effluent Sampling Point" means a sampling point maintained as referenced under Condition 3(1);

16. "Process Materials", means raw materials for use in an industrial process at the Plant, manufacturing intermediates produced at the Plant, or products or by-products of an industrial process at the Plant, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;

17. "Quarter" means all or part of a period of three (3) consecutive months beginning on the first day of January, April, July or October;

18. "Semi-annual Period" means all or part of a period of six (6) months beginning on the first day of January or July;

19. "Specific Parameter" means 2,3,7,8-tetrachlorodibenzo-para-dioxin, 2,3,7,8-tetrachlorodibenzofuran and 2,3,7,8 substituted dioxin and furan congeners.

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

TERMS AND CONDITIONS

1. BYPASSES

1. The Discharger shall not permit effluent that would ordinarily flow past a sampling point maintained under this Approval to be discharged from the Discharger's Plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event.

2. SAMPLING AND ANALYTICAL PROCEDURES

1. The Discharger shall carry out the maintenance of sampling point obligations of this Approval and the sampling and analysis obligations of this Approval, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry publication entitled "Protocol

for the Sampling and Analysis of Industrial/Municipal Wastewater", as amended from time to time.

2. The Discharger shall maintain the sampling equipment used at the Discharger's Plant for sampling required by this Approval in a way that ensures that the samples collected at the Plant under this Approval accurately reflect the level of discharge of each Limited Parameter, Merged Parameter and Specific Parameter from the Plant.

3. SAMPLING POINTS

1. The Discharger shall maintain a sampling point at each sampling point location designated as a Process Effluent Sampling Point in this Approval.

2. The Discharger shall, maintain a sampling point at each sampling point location designated as a Merged Effluent Sampling Point in this Approval.

3. If the District Manager is satisfied, on the basis of written submissions from the Discharger, that one or more of the circumstances described below exist at the Discharger's Plant, with the result that it is impractical to maintain or use a sampling point maintained at the Plant under this Approval, the District Manager may give the Discharger written permission to eliminate the sampling point:

    a. a process change or redirection of or change in the character of an effluent stream has occurred or is expected to occur at the discharger's plant.

    b. equipment used for sampling or flow measurement at the sampling point is damaged or non-functional.

    c. the effluent flowing in the stream on which the sampling point identified in this Approval has been permanently eliminated.

4. Where the Discharger is permitted to eliminate a sampling point because of a circumstance described in paragraph (a) or (b) of subsection (3) of this condition, the Discharger shall, within ninety (90) days after the day on which the sampling point is eliminated, establish a replacement sampling point.

5. The replacement sampling point shall be established on the effluent stream from which the sampling point was eliminated, at a location approved in writing by the District Manager.

6. The replacement sampling point shall yield results that would reflect the level of discharge of each limited parameter and merged parameter from the Discharger's Plant as reliably as did monitoring at the eliminated sampling point.

7. If the Discharger replaces a sampling point under subsection (4) the Discharger has all the same obligations in connection with the replacement sampling point that the discharger had in connection with the eliminated sampling point.

4. REPORTS ON SAMPLING POINTS

1. The Discharger who eliminates a sampling point at the Discharger's Plant under Condition 3(3) but is not required to replace the sampling point under Condition 3(4) shall keep an updated list and plot plan showing the sampling points maintained under this Approval at the Discharger's Plant and submit to the Ministry up on request.

5. USE OF SAMPLING POINTS

1. Except as permitted or required under Condition 17, the Discharger shall use the sampling points identified in this Approval for all sampling required by this Approval.

6. CALCULATION OF LOADINGS — GENERAL

1. For the purposes of performing a calculation under Conditions 7 and 8, the Discharger shall use the actual analytical result obtained by the laboratory.

2. Despite subsection (1) of this condition, where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", as amended from time to time, the Discharger shall use the value zero for the purpose of performing a calculation under Conditions 7 and 8.

3. The Discharger shall ensure that each calculation of a process effluent loading required by Condition 7 and each calculation of a merged effluent loading required by Condition 8 is performed as soon as reasonably possible after the analytical result on which the calculation is based becomes available to the Discharger.

7. CALCULATION OF LOADINGS — PROCESS EFFLUENT

1. The Discharger shall calculate, in kilograms, a daily process effluent stream loading for each Limited Parameter in each Process Effluent Monitoring Stream for each day on which a sample is collected from the stream for analysis for the parameter.

2. When calculating a daily stream loading under subsection (1) of this condition, the Discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under Condition 25, for the stream for the day.

3. The Discharger shall calculate, in kilograms, a daily process effluent Plant loading for each Limited Parameter for each day for which the Discharger is required to calculate a daily process effluent stream loading for the parameter under subsection (1) of this condition.

4. For the purposes of subsection (3) of this condition, a daily process effluent Plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the

parameter calculated under subsection (1) of this condition, for the day.

5. Where the Discharger calculates only one daily process effluent stream loading for a parameter for a day under subsection (1) of this condition, the daily process effluent Plant loading for the parameter for the day for the purposes of subsection (3) of this condition is the single daily process effluent stream loading for the parameter for the day.

6. The Discharger shall calculate, in kilograms, a monthly average process effluent Plant loading for each Limited Parameter for each month in which a sample is collected under this Approval more than once from a Process Effluent Monitoring Stream at the Discharger's Plant for analysis for the parameter.

7. For the purposes of subsection (6) of this condition, a monthly average process effluent Plant loading for a parameter for a month is the arithmetic mean of the daily process effluent Plant loadings for the parameter calculated under subsection (3) of this condition for the month.

8. CALCULATION OF LOADINGS — MERGED EFFLUENT

1. The Discharger shall calculate, in kilograms, a daily merged effluent stream loading for each Merged Parameter in each Merged Effluent Monitoring Stream for each day on which a sample is collected from the stream for analysis for the parameter.

2. When calculating a daily stream loading under subsection (1) of this condition, the Discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under Condition 25, for the stream for the day.

3. The Discharger shall calculate, in kilograms, a daily merged effluent Plant loading for each Merged Parameter for each day for which the Discharger is required to calculate a merged effluent stream loading for the parameter under subsection (1) of this condition.

4. For the purposes of subsection (3) of this condition, a daily merged effluent Plant loading for a parameter for a day is the sum, in kilograms, of the daily merged effluent stream loadings for the parameter calculated under subsection (1) of this condition for the day.

5. Where the Discharger calculates only one daily merged effluent stream loading for a parameter for a day under subsection (1) of this condition, the daily merged effluent Plant loading for the parameter for the day for the purposes of subsection (3) of this condition is the single daily merged effluent stream loading for the parameter for the day.

6. The Discharger shall calculate, in kilograms, a monthly average merged effluent Plant loading for each Merged Parameter for each month in which a sample is collected under this Approval more than once from a Merged Effluent Monitoring Stream at the Discharger's Plant for analysis for the parameter.

7. For the purposes of subsection (6) of this condition, a monthly average merged effluent Plant loading for a parameter for a month is the arithmetic mean of the daily merged effluent Plant loadings for the

parameter calculated under subsection (3) of this condition for the month.

9. PARAMETER LIMITS

1. The Discharger shall ensure that each daily process effluent Plant loading calculated for a parameter under Condition 7 in connection with the Discharger's Plant does not exceed the daily Plant loading limit specified for the parameter and the Plant in the Table titled "Process Effluent: Designated Sampling Points, Limits" in **Schedule C** in this Approval.

2. The Discharger shall ensure that each monthly average process effluent Plant loading calculated for a parameter under Condition 7 in connection with the Discharger's Plant does not exceed the monthly average Plant loading limit specified for the parameter and the Plant in the Table titled "Process Effluent: Designated Sampling Points, Limits" in **Schedule C** in this Approval.

3. Subject to subsection (7) of this condition, the Discharger shall control the quality of each Process Effluent Monitoring Stream-at the Discharger's Plant to ensure that the pH value of any sample collected at a Process Effluent Sampling Point or a Process Effluent Batch Sampling Point at the Plant is within the range of 6.0 to 9.5.

4. Throughout any day on which the Discharger has used an alternate sampling point on a Process Effluent Monitoring Stream for sampling required by Condition 17, as permitted by Condition 17(7) and (8), the Discharger:

   a. shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and

   b. need not comply with subsection (6) of this condition with respect to the stream.

10. LETHALITY LIMITS

1. The Discharger shall control the quality of each stream at the Discharger's Plant for which a sampling point is listed in this Approval to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at an applicable sampling point for the Plant results in mortality for no more than fifty (50) per cent of the test organisms in hundred (100) per cent effluent.

11. MONITORING — GENERAL

1. Where the Discharger is required by this Approval to Pick Up a set of samples and analyze it for certain parameters, the Discharger shall Pick Up a set of samples sufficient to allow all the analyses to be performed.

2. The Discharger shall use all reasonable efforts to ensure that all analyses required by this Approval are completed as soon as reasonably possible and that the results of those analyses are made available to

the Discharger as soon as reasonably possible.

3. Subject to subsection (4) of this condition, the Discharger shall Pick Up all sets of samples required to be picked up at the Discharger's Plant under Conditions 12, 13, 14, 15 and 24 between the hours of 7 a.m. and 10 a.m.

4. If the District Manager is satisfied, on the basis of written submissions from the Discharger, that the circumstances at the Discharger's Plant are such that it would be impractical to Pick Up a set of samples from each sampling point maintained at the Plant under this Approval within the time period specified in subsection (3), the District Manager may give the Discharger a written notice in respect of the Plant, varying the time period specified in subsection (3).

5. Subject to subsection (6) of this condition, where the Discharger is required by Conditions 12, 13, 14 and 15 to Pick Up a set of samples the Discharger shall Pick Up a set collected over the 24-hour period immediately preceding the pick-up.

6. The 24-hour period referred to in subsection (5) of this condition may be shortened or enlarged by up to three hours to permit the Discharger to take advantage of the three-hour range specified in subsection (3) of this condition.

12. MONITORING — PROCESS EFFLUENT — DAILY

1. The Discharger shall, on each day, Pick Up a set of samples collected at each Process Effluent Sampling Point at the Discharger's Plant and shall, subject to subsection (2) of this condition, analyze each set of samples for the parameters for which the frequency of monitoring, as set out in the Table titled "Process Effluent: Designated Sampling Points, Limits" in **Schedule C** in this Approval, is daily.

2. The Discharger is relieved of the obligations under subsection (1) of this condition relating to a parameter and shall instead, on three (3) days in each week, Pick Up a set of samples collected at each Process Effluent Sampling Point at the Discharger's Plant and analyze each set of samples for the parameter where,

   a. the Discharger has performed monitoring under subsection (1) of this condition for twelve (12) consecutive months; and

   b. the monthly average process effluent Plant loading for the parameter, for each of the twelve (12) months, as calculated under Condition 7(6), is equal to or less than 75 per cent of the monthly average Plant loading limit for the parameter as set out in the Table titled "Process Effluent" in **Schedule C** in this Approval.

3. There shall be an interval of at least 24 hours between successive pick-up days at the Plant under subsection (2) of this condition.

4. All samples picked up under subsection (3) of this condition in a week shall be picked up on the same

three (3) days in the week.

5. Subsection (2) of this condition ceases to apply in relation to a parameter and the Discharger shall instead comply with the requirements of subsection (1) of this condition in relation to the parameter where, during any twelve (12) consecutive months,

   a. a daily process effluent Plant loading for the parameter, as calculated under Condition 7(3), exceeds the daily Plant loading limit for the parameter as set out in the Table titled "Process Effluent: Designated Sampling Points, Limits" in **Schedule C** in this Approval, on any three occasions; or

   b. a monthly average process effluent Plant loading for the parameter, as calculated under Condition 7(6), exceeds the monthly average Plant loading limit as set out in the Table titled "Process Effluent: Designated Sampling Points, Limits" in **Schedule C** in this Approval, on any two occasions.

6. The Discharger shall notify the Director in writing of any change in the frequency of monitoring under this condition at the Discharger's Plant within thirty (30) days after the day on which the change occurs.

7. The Discharger need not meet the requirements of subsection (1) of this condition where it is impossible to do so because of sampling by a provincial officer.

13. MONITORING — PROCESS EFFLUENT — WEEKLY

1. The Discharger shall, on one day in each week, Pick Up a set of samples collected at each Process Effluent Sampling Point at the Discharger's Plant and shall, subject to subsection (2) of this condition, analyze each set of samples for the parameters for which the frequency of monitoring, as set out in the Table titled "Process Effluent: Designated Sampling Points, Limits" in **Schedule C** in this Approval, is weekly.

2. There shall be an interval of at least four (4) days between successive pick-up days at the Plant under subsection (1) of this condition.

3. All samples picked up under subsection (1) of this condition in a week shall be picked up on the same day in the week.

14. MONITORING — PROCESS EFFLUENT — QUARTERLY

1. The Discharger shall, on one day in each Quarter, on a day on which samples are picked up at the Plant under Condition 13(1), Pick Up a set of samples collected at each Process Effluent Sampling Point at the Discharger's Plant and shall, subject to subsection (2) of this condition analyze each set of samples for the parameters for which the frequency of monitoring, as set out in the Table titled Process Effluent: Designated Sampling Points, Limits in **Schedule C** in this Approval, is quarterly.

2. There shall be an interval of at least forty-five (45) days between successive pick-up days at the Plant under subsection (1) of this condition.

3. All samples picked up under subsection (1) of this condition in a Quarter shall be picked up on the same day in the Quarter.

15. MONITORING — MERGED EFFLUENT — WEEKLY

1. The Discharger shall, on one day in each week, Pick Up a set of samples collected at each Merged Effluent Sampling Point at the Plant and shall analyze each set of samples for the parameters listed in the Table titled "Merged Effluent: Designated Sampling Points, Limits, Monitoring Frequency" in **Schedule C** in this Approval.

2. All samples collected and picked up at the Plant under subsection (1) of this condition shall be collected and picked up on a day on which samples are picked up at the Plant under Condition 13(1).

16. MONITORING — PROCESS EFFLUENT — QUALITY CONTROL

1. On one (1) day in each year, on a day on which samples are picked up at the Plant under Condition 13(1), each Discharger shall collect and Pick Up a duplicate sample for each sample picked up on that day under Condition 13(1) at one Process Effluent Sampling Point at the Discharger's Plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in the Table titled "Process Effluent: Designated Sampling Points, Limits" in **Schedule C** in this Approval, is weekly or quarterly.

2. Despite subsection (1) of this condition, the Discharger need not analyze any sample under subsection (1) of this condition for 2,3,7,8-tetrachlorodibenzo-para-dioxin, 2,3,7,8-tetrachlorodibenzofuran or 2,3,7,8 substituted dioxin and furan congeners.

3. The Discharger shall prepare a travelling blank and a travelling spiked blank sample for each sample for which a duplicate sample is picked up at the Plant under subsection (1) of this condition and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", as amended from time to time.

4. There shall be an interval of at least six (6) months between successive pick-up days at the Plant under subsection (1) of this condition.

17. MONITORING — PROCESS EFFLUENT — pH MEASUREMENT

1. The Discharger shall, on each day, during the time period set out in Condition 11(3) or (4), collect a grab sample from each Process Effluent Sampling Point at the Discharger's Plant and shall analyze each sample for the parameter pH.

2. The Discharger shall, within each 24-hour period beginning with the collection of the first grab sample at the Plant under subsection (1) of this condition on each day, collect two more grab samples from each Process Effluent Sampling Point at the Discharger's Plant and shall analyze each sample for the

parameter pH.

3. There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) of this condition in each 24-hour period.

4. Each grab sample collected under subsections (1) and (2) of this condition shall be picked up within 24 hours of when it was collected.

5. Instead of complying with subsections (1) to (4) of this condition with respect to a sampling point, the Discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each day during the time period applicable to the Plant under Condition 11(3) or (4), and two more times in each 24-hour period beginning with the first analysis at the Plant under this subsection in each day.

6. There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) of this condition in each 24-hour period.

7. For the purposes of subsections (1) to (6) of this condition, the Discharger shall use either the sampling point referenced under Condition 3(1) on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another Plant.

8. Before using an alternate sampling point under subsection (7) of this condition the Discharger shall give the Director,

   a. a written notice that,

      i. sets out the name of the alternate sampling point,

      ii. describes its location, and

      iii. assigns a number to it; and

   b. a revised version of the list and plot plan submitted under Condition 4 showing the alternate sampling point.

9. The Discharger shall, each time a batch of effluent flows past a Process Effluent Batch Sampling Point at the Discharger's Plant, collect three grab samples from the sampling point and shall analyze each sample for the parameter pH.

10. Where the Discharger is required by subsection (9) of this condition to collect three grab samples in respect of a batch of effluent, the Discharger shall make every reasonable effort to ensure,

    a. that the first grab sample is collected as soon as possible after the batch begins to flow past the

sampling point;

b. that the third grab sample is collected as little before the batch ceases to flow past the sampling point as possible; and

c. that the interval between the collection of the first and second grab samples is as equal as possible to the interval between the collection of the second and third grab samples.

18. MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT

1. The Discharger shall perform the rainbow trout acute lethality test according to the procedures described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout", as amended from time to time.

2. Each rainbow trout acute lethality test required by this Condition shall be carried out as a single concentration test using 100 per cent effluent.

3. On one day in each month, the Discharger shall collect and immediately Pick Up a grab sample at each Merged Effluent Sampling Point listed in this Approval and shall perform a rainbow trout acute lethality test on each sample.

4. All samples collected and picked up at the Plant under subsection (3) of this condition shall be collected and picked up on a day on which samples are picked up at the Plant under Condition 15(1);

5. There shall be an interval of at least fifteen (15) days between successive pick-up days at the Plant under subsection (3) of this condition.

6. All samples picked up under subsection (3) of this condition in a month shall be picked up on the same day in the month.

7. Where the Discharger has performed tests under subsection (3) of this condition for twelve (12) consecutive months, in accordance with MISA Regulation 63/95 before this amendment notice is issued, on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed fifty (50) per cent, the Discharger is relieved of the obligations under subsection (3) of this condition relating to the sampling point and shall instead collect and immediately Pick Up a grab sample at the sampling point on one day in each Quarter and perform a rainbow trout acute lethality test on each sample.

8. Samples picked up at the Plant under subsection (7) of this condition shall be picked up on a day on which samples are picked up at the Plant under subsection (3) of this condition.

9. If no samples are being picked up at the Plant under subsection (3) of this condition during a Quarter, samples picked up at the Plant during the Quarter under subsection (7) of this condition shall be picked

up on a day on which samples are picked up at the Plant under Condition 15(1);

10. There shall be an interval of at least forty-five (45) days between successive pick-up days at the Plant under subsection (7) of this condition. All samples picked up under subsection (7) of this condition in a Quarter shall be picked up on the same day in the Quarter.

11. If a rainbow trout acute lethality test performed under subsection (7) of this condition on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (7) to (11) of this condition cease to apply in relation to samples from that sampling point, and the Discharger shall instead comply with the requirements of subsection (3) of this condition relating to the sampling point, until the tests performed under subsection (3) of this condition on all samples collected from the sampling point for a further twelve (12) consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test.

12. The Discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Approval at the Discharger's Plant, within thirty (30) days after the day on which the change begins.

19. MONITORING — ACUTE LETHALITY TESTING — *DAPHNIA MAGNA*

1. The Discharger shall perform the *Daphnia magna* acute lethality test according to the procedures described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* ", as amended from time to time.

2. Condition 18 (2) to (13) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna* .

3. The Discharger shall Pick Up each set of samples required to be collected from a sampling point at the Discharger's Plant under this condition on a day on which the Discharger collects a sample from the sampling point under Condition 18, to the extent possible having regard to the frequency of monitoring required at the sampling point under this condition and Condition 18.

20. MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT — SAMPLING POINTS

1. On one day in each month, on a day on which samples are picked up at the Plant under Condition 15, the Discharger shall, collect and immediately Pick Up a grab sample at each sampling point that is listed in the Table titled "Acute Lethality Testing: Sampling Points" in **Schedule C** in this Approval and shall perform a rainbow trout acute lethality test on each sample.

2. Condition 18 (1) to (2) apply with necessary modifications to each sample picked up at the Discharger's Plant under subsection (1) of this condition.

3. There shall be an interval of at least fifteen (15) days between successive pick-up days at the Plant

under subsection (1) of this condition.

4. All samples picked up under subsection (1) of this condition in a month shall be picked up on the same day in the month.

5. Where the Discharger has performed tests under subsection (1) of this condition for twelve (12) consecutive months on samples collected from the same sampling point, the Discharger is relieved of the obligations under subsection (1) of this condition relating to the sampling point and shall instead, on one day in each Quarter, on a day on which samples are picked up at the Plant under Condition 15, collect and immediately Pick Up a grab sample at the sampling point and perform a rainbow trout acute lethality test on each sample.

6. There shall be an interval of at least forty-five (45) days between successive pick-up days at the Plant under subsection (5) of this condition.

7. All samples picked up under subsection (5) of this condition in a Quarter shall be picked up on the same day in the Quarter.

21. MONITORING — ACUTE LETHALITY — *DAPHNIA MAGNA* — SAMPLING POINTS

1. The Discharger shall perform the *Daphnia magna* acute lethality test according to the procedures described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* ", as amended from time to time.

2. Each *Daphnia magna* acute lethality test required by this condition shall be carried out as a single concentration test using 100 per cent effluent.

3. On one day in each month, on a day on which samples are picked up at the Plant under Condition 15, the Discharger shall, collect and immediately Pick Up a grab sample at each sampling point that is listed in the Table titled "Acute Lethality Testing: Sampling Points" in **Schedule C** in this Approval and shall perform a *Daphnia magna* acute lethality test on each sample.

4. There shall be an interval of at least fifteen (15) days between successive pick-up days at the Plant under subsection (3) of this condition.

5. All samples picked up under subsection (3) of this condition in a month shall be picked up on the same day in the month.

6. Where the Discharger has performed tests under subsection (3) of this condition for twelve (12) consecutive months on samples collected from the same sampling point, the Discharger is relieved of the obligations under subsection (3) of this condition relating to the sampling point and shall instead collect and immediately Pick Up a grab sample at the sampling point on one day in each Quarter and perform a *Daphnia magna* acute lethality test on each sample.

7. Samples picked up at the Plant under subsection (6) of this condition shall be picked up on a day on which samples are picked up at the Plant under subsection (3) of this condition.

8. If no samples are being picked up at the Plant under subsection (3) of this condition during a Quarter, samples picked up at the Plant during the Quarter under subsection (6) of this condition shall be picked up on a day on which samples are picked up at the Plant under Condition 15.

9. There shall be an interval of at least forty-five (45) days between successive pick-up days at the Plant under subsection (6) of this condition.

10. All samples picked up under subsection (6) of this condition in a Quarter shall be picked up on the same day in the Quarter.

22. MONITORING — ACUTE LETHALITY — TOXICITY ELIMINATION REPORTS

1. If three consecutive rainbow trout acute lethality tests performed under Condition 20 (1) or (5) or under a combination of Condition 20 (1) or (5) on samples picked up at a sampling point result in the mortality of more than 50 per cent of the test rainbow trout, the Discharger shall submit to the Director a toxicity elimination report with respect to the stream on which the sampling point is located.

2. A toxicity elimination report with respect to the stream on which the sampling point is located shall set out the following information:

   a. A detailed analysis of the causes and sources of the mortality of more than 50 per cent of the test rainbow trout at the sampling point.

   b. A synopsis of any studies conducted to support the analysis.

   c. A detailed description of the methods by which the quality of the stream could be controlled to eliminate the mortality of more than 50 per cent of the test rainbow trout at the sampling point.

   d. An evaluation of the technical feasibility of implementing, at the Discharger's Plant, each method described under paragraph (c) and a statement of which of the methods are technically feasible.

   e. An estimate of the financial cost to the Discharger of implementing each method identified as technically feasible under paragraph (c).

3. Where the Discharger is required by subsection (1) of this condition to submit a toxicity elimination report to the Director, the Discharger shall submit the report to the Director no later than twelve (12) months after the day on which the third of three consecutive rainbow trout acute lethality tests was performed that resulted in the mortality of more than 50 per cent of the test rainbow trout at the sampling point on the stream.

4. In addition, where the Discharger is required by subsection (1) of this condition to submit a toxicity elimination report with respect to a stream, the Discharger shall submit to the Director annual toxicity

elimination progress reports with respect to the stream, no later than the anniversary of the day on which the toxicity elimination report with respect to the stream was required to be submitted under subsection (3) of this condition.

5. A toxicity elimination progress report with respect to a stream shall set out the following information:

   a. A detailed description of any methods, in addition to those described under paragraph (c) of subsection (2) of this condition with respect to the stream, by which the quality of the stream could be controlled to eliminate the mortality of more than 50 per cent of the test rainbow trout at the sampling point.

   b. An evaluation of the technical feasibility of implementing, at the Discharger's Plant, each method described under paragraph (a) and a statement of which of the methods are technically feasible.

   c. An estimate of the financial cost to the Discharger of implementing each method identified as technically feasible under paragraph (b).

6. Where the Discharger has performed three consecutive quarterly tests under Condition 20 (5) on samples collected from a stream in relation to which the Discharger has obligations under subsection (4) of this condition and the mortality of the rainbow trout in each test did not exceed 50 per cent, the Discharger is relieved of the obligations under subsection (4) of this condition in relation to that stream.

7. Where the Discharger has been relieved by subsection (6) of this condition of the obligation to submit toxicity elimination progress reports in relation to a stream and three consecutive quarterly tests under Condition 20 (5) on samples collected from that stream result in the mortality of more than 50 per cent of the test rainbow trout, subsection (6) of this condition ceases to apply and the Discharger shall instead comply with the requirements of subsection (4) of this condition relating to the stream, until a further three consecutive quarterly tests under Condition 20 (5) on samples collected from the stream result in mortality for no more than 50 per cent of the rainbow trout in each test.

8. Subsections (1) to (7) of this condition apply with necessary modifications to *Daphnia magna* acute lethality tests performed under Condition 21 and, for the purpose,

   a. a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna* ; and

   b. a reference to Condition 20(1) shall be deemed to be a reference to Condition 21(3) and a reference to Condition 20(5) shall be deemed to be a reference to Condition 21(6).

23. MONITORING — CHRONIC TOXICITY TESTING — FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

1. The Discharger shall perform a seven-day fathead minnow growth inhibition test according to the procedure described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows", as amended from time to

time.

2. The Discharger shall perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test according to the procedure described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia* ", as amended from time to time.

3. On one day in each Semi-annual Period, on a day on which samples are picked up at the Plant under Condition 13 the Discharger shall, collect and immediately Pick Up a grab sample from each sampling point listed that is listed in this Approval, and shall perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.

4. There shall be an interval of at least ninety (90) days between successive pick-up days at the Plant under subsection (3) of this condition.

5. All samples picked up under subsection (3) of this condition in a Semi-annual Period shall be picked up on the same day in the Semi-annual Period.

6. The Discharger need not collect a sample from a sampling point in accordance with subsection (3) of this condition until twelve (12) consecutive monthly rainbow trout acute lethality tests and twelve (12) consecutive monthly *Daphnia magna* acute lethality tests performed on samples collected at the sampling point at the Discharger's Plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent.

24. MONITORING — MERGED EFFLUENT — pH AND SPECIFIC CONDUCTANCE MEASUREMENT

1. The Discharger shall, on one day in each week, on the day on which samples are picked up at the Plant under Condition 13, during the time period applicable to the Plant under Condition 11 (3) or (4), collect a grab sample from each Merged Effluent Sampling Point at the Discharger's Plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

2. Within the 24-hour period beginning with the collection of the first grab sample at the Plant under subsection (1) of this condition in each week, the Discharger shall collect two more grab samples from each Merged Effluent Sampling Point at the Discharger's Plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

3. There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) of this condition in each 24-hour period.

4. Each grab sample collected under subsections (1) and (2) of this condition shall be picked up within 24 hours of when it was collected.

5. Instead of complying with subsections (1) to (4) of this condition with respect to a stream, the

Discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH and the parameter specific conductance on one day in each week, on the day on which samples are picked up at the Plant under Condition 13(1), during the time period applicable to the Plant under Condition 11 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the Plant under this subsection for the week.

6. There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) of this condition in each 24-hour period.

25. EFFLUENT FLOW MEASUREMENT

1. For the purposes of this condition, a volume of effluent for a stream for a day is the volume that flowed past the sampling point referenced under Condition 3 on the stream during the 24-hour period preceding the pick-up of the first sample picked up from the stream for the day.

2. The Discharger shall determine in cubic metres a daily volume of effluent for each Process Effluent Monitoring Stream at the Discharger's Plant for each day on which a sample is collected under this Approval from the stream, by integration of continuous flowrate measurements.

3. Despite subsection (2) of this condition, where a Process Effluent Monitoring Stream discharges on an intermittent basis, the daily volumes for the stream may be determined either by integration of continuous flowrate measurements or by the summation of the individual intermittent volume measurements.

4. The Discharger shall use flow measurement methods that allow the daily volumes for Process Effluent Monitoring Streams to be determined to an accuracy of within plus or minus 15 per cent.

5. The Discharger shall determine in cubic metres a daily volume of effluent for each Merged Effluent Monitoring Stream at the Discharger's Plant for each day on which a sample is collected under this Approval from the stream.

6. The Discharger shall use flow measurement methods that allow the daily volumes for Merged Effluent Monitoring Streams to be determined to an accuracy of within plus or minus 20 per cent.

7. The Discharger shall, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that;

   a. each flow measurement method used under subsections (2) and (3) of this condition meets the accuracy requirements of subsection (4) of this condition;

   b. each flow measurement method used under subsection (5) of this condition meets the accuracy requirements of subsection (6) of this condition; and

8. Where the Discharger uses a new flow measurement method or alters an existing flow measurement method, the Discharger shall determine by calibration or confirm by means of a certified report of a

registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements in Condition 25 of this Approval, within two weeks after the day on which the new or altered method or system is used.

9. The Discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the Discharger's Plant and shall maintain each flow measurement system according to good operating practices.

10. The Discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this condition in a way that permits inspection by a provincial officer.

26. CALCULATION OF PLANT VOLUMES

1. The Discharger shall calculate, in cubic metres, a daily process effluent Plant volume for each day.

2. For the purposes of subsection (1) of this condition, a process effluent Plant volume for a day is the sum of the daily process effluent volumes determined under Condition 25 for the day.

3. The Discharger shall calculate, in cubic metres, a monthly average process effluent Plant volume for each month, by taking the arithmetic mean of the daily process effluent Plant volumes calculated under subsection (1) of this condition, for the month.

4. The Discharger shall calculate, in cubic metres, a daily merged effluent Plant volume for each day.

5. For the purposes of subsection (4) of this condition, a merged effluent Plant volume for a day is the sum of the daily merged effluent volumes determined under Condition 25 for the day.

6. The Discharger shall calculate, in cubic metres, a monthly average merged effluent Plant volume for each month, by taking the arithmetic mean of the daily merged effluent Plant volumes calculated under subsection (4) of this condition, for the month.

27. RECORD KEEPING

1. The Discharger shall keep records of all analytical results obtained under this Approval, all calculations performed under this Approval, and all determinations and calculations made or performed under this Approval.

2. The Discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of this Approval, including, for each sample, the date, the time of pick-up, the sampling procedures used and any incidents likely to affect the analytical results.

3. The Discharger shall keep records of the results of all monitoring performed under this Approval.

4. The Discharger shall keep records of all maintenance and calibration procedures performed under this

Approval.

5. The Discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Approval, stating the date, duration and cause of each malfunction and including a description of any remedial action taken.

6. The Discharger shall keep records of any incident in which effluent that would ordinarily flow past a sampling point referenced under this Approval is discharged from the Discharger's Plant without flowing past that sampling point, stating the date, duration, cause and nature of each incident.

7. The Discharger shall keep records of all Process Changes and redirection of or changes in the character of effluent streams that affect the quality of effluent at any sampling point referenced under this Approval at the Discharger's Plant.

8. The Discharger shall make each record required by this condition as soon as reasonably possible and shall keep each such record for a period of three (3) years.

9. The Discharger shall ensure that all records kept under this condition are available to Ministry staff at the Discharger's Plant, on request during the Plant's normal office hours.

28. REPORTS AVAILABLE TO THE PUBLIC

1. On or before June 1 in each year, each Discharger shall prepare a report relating to the previous calendar year and including,

   a. a summary of Plant loadings calculated under Conditions 7 and 8 of this Approval;

   b. a summary of the results of monitoring performed under Conditions 12, 15, 17, 19, 23 and 24 of this Approval;

   c. a summary of calculations performed under Condition 26. (1) and (4) of this Approval;

   d. a summary of the loadings or other results that exceeded a limit under Condition 9 or 10 of this Approval; and

   e. a summary of the incidents in which effluent that would ordinarily flow past a sampling point referenced under this Approval is discharged from the Discharger's Plant without flowing past that sampling point.

2. The Discharger shall ensure that each report prepared under subsection (1) of this condition is available to any person at the Discharger's Plant, on request, during the Plant's normal office hours.

3. The Discharger shall provide the Director, upon request, with a copy of any report that the Discharger

has prepared under subsection (1) of this condition.

4. The Discharger shall ensure that each report prepared under Condition 22 is available to any person at the Discharger's Plant, on request, during the Plant's normal office hours.

29. REPORTS TO THE DISTRICT MANAGER— GENERAL

1. The Discharger shall notify the District Manager and the Director in writing of any change of name or ownership of the Discharger's Plant occurring, within thirty (30) days after the end of the month in which the change occurs.

2. The Discharger shall notify the District Manager in writing of any Process Change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point identified in this Approval at the Discharger's Plant, within thirty (30) days of the change or redirection.

3. The Discharger need not comply with subsection (2) of this condition where the effect of the change or redirection on effluent quality is of less than one week's duration.

30. REPORTS TO THE DISTRICT MANAGER

1. The Discharger shall report to the District Manager any incident in which effluent that would ordinarily flow past a point referenced under this Approval is discharged from the Discharger's Plant without flowing past that sampling point (bypass).

2. The Discharger shall report to the District Manager any loading or other result that exceeds a limit prescribed in this Approval.

3. A report required under subsection (1) or (2) of this condition shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible.

31. QUARTERLY REPORTS TO THE DISTRICT MANAGER

1. No later than forty-five (45) days after the end of each Quarter, the Discharger shall submit a report to the District Manager containing information relating to the Discharger's Plant throughout the Quarter as required by subsections (3) to (9) of this condition.

2. A report under this condition shall be submitted to the District Manager in the manner and form the District Manager specifies from time to time.

3. A report under this condition shall include all information included in a report given under Condition 30 during the Quarter.

4. The Discharger shall report, for each month in the Quarter,

a. the monthly average Plant loadings and the highest and lowest daily Plant loadings calculated under Condition 7 of this Approval for each Limited Parameter; and

b. the monthly average Plant loadings and the highest and lowest daily Plant loadings calculated under Condition 8 of this Approval for each Merged Parameter.

5. The Discharger shall report, for each month in the Quarter,

a. the monthly average process effluent Plant volume and the highest and lowest daily process effluent Plant volumes calculated under Condition 26 of this Approval; and

b. the monthly average merged effluent Plant volume and the highest and lowest daily merged effluent Plant volumes calculated under Condition 26 of this Approval.

6. The Discharger shall, for each sampling point identified in this Approval at the Discharger's Plant, report the number of days in each month in the Quarter on which effluent flowed past the sampling point.

7. The Discharger shall report, for each month in the Quarter, the highest and lowest pH results obtained under Condition 17 for each Process Effluent Monitoring Stream at the Discharger's Plant.

8. The Discharger shall report, for each month in the Quarter, the highest and lowest pH results and the highest and lowest specific conductance results obtained under Condition 24 for each Merged Effluent Monitoring Stream at the Discharger's Plant.

9. The Discharger shall report, for each Quarter, the results obtained under Condition 14 (1) in respect of each Specific Parameter for each Process Effluent Sampling Point at the Discharger's Plant.

32. REPORTS TO THE DISTRICT MANAGER — CHRONIC TOXICITY TESTING

1. A report under this condition shall be submitted to the District Manager in the manner and form the District Manager specifies from time to time.

2. A report under subsection (1) of this condition shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur.

33. CONFLICT BETWEEN APPROVALS

1. Where there is conflict between a limit in this amendment notice and a limit in the ECA for this Plant for a given parameter, the most stringent of the two limits shall apply.

The reasons for this amendment to the Approval are as follows:

1. Conditions 1 to 32 are imposed to provide for substantially equivalent requirements as is currently provided

in Ontario Regulation 63/95 (*Effluent Monitoring and Effluent Limits – Organic Chemical Manufacturing Sector*) such that there is a continued protection of the environment in the event that Ontario Regulation 63/95 is revoked:

a. Effluent limits are imposed to ensure that the effluent discharged from the Discharger's Plant to the receiver meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver.

b. Monitoring and recording requirements are included to require the Discharger to demonstrate on a continual basis that the quality and quantity of the effluent from the Discharger's Plant is consistent with the effluent limits specified in this Approval and that the effluent does not cause any impairment to the receiving watercourse.

c. Reporting requirements are included to provide a performance record for future references and to ensure that the Ministry is made aware of problems as they arise, so that the Ministry can work with the Discharger in resolving the problems in a timely manner.

2. Condition 33 is included to emphasize the precedence of the most stringent limit, if there are conflicting limits between this amendment notice and the ECA for the Plant.

SCHEDULE 'C'

TABLE: MERGED EFFLUENT: DESIGNATED SAMPLING POINTS, MONITORING FREQUENCY

Designated Merged Effluent Sampling Point: 1100, Site Effluent to River

Item	Analytical Test Group	Column 1 Parameter	Column 2 Monitoring Frequency
1	5a	DOC	Weekly
2	8	Total suspended solids	Weekly
4	25	Oil and Grease	Weekly

TABLE: ACUTE LETHALITY: SAMPLING POINTS

Column 1 Plant Name	Column 2 Sampling Point — Number and Description
INVISTA (Canada) Company (formerly Dupont Canada Inc.) (Maitland)	1100, Site Effluent to River (Merged Effluent)

TABLE: ACUTE LETHALITY TESTING: SAMPLING POINTS

Column 1 Plant Name	Column 2 Sampling Point — Number and Description
INVISTA (Canada) Company (formerly Dupont Canada Inc.) (Maitland)	0300, Wastewater Treatment Plant Effluent to Main Effluent Stream

TABLE: CHRONIC TOXICITY TESTING: SAMPLING POINTS

Column 1 Plant Name	Column 2 Sampling Point — Number and Description
INVISTA (Canada) Company (formerly Dupont Canada Inc.) (Maitland)	1100, Site Effluent to River (Merged Effluent)

Schedule 'D'

Limited Operational Flexibility (LOF) Criteria for Modifications to Industrial Sewage Works

1. The modifications to sewage works approved under an Environmental Compliance Approval, that are permitted under the Limited Operational Flexibility (LOF), are outlined below and are subject to the LOF conditions in the Approval, and require the submission of the Notice of Modifications. If there is a conflict between the sewage works listed below and the Terms and Conditions in the Approval, the Terms and Conditions in the Approval shall take precedence.

   1.1 Sewage Pumping Stations:
   (a) 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, provided that the modifications do not result in an increase of the sewage treatment plant Rated Capacity and the existing flow process and/or treatment train are maintained, as applicable.
   (b) Forcemain relining and replacement with similar pipe size where the nominal diameter is not greater than 1,200mm.

   1.2 Sewage Treatment Process:
   (a) Installing additional chemical dosage equipment including replacing with alternative 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 the effluent quantity and quality.
   (b) Expanding the buffer zone between a sanitary sewage lagoon facility or land treatment area and adjacent uses provided that the buffer zone is entirely on the proponent's land.
   (c) Optimizing 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.
   (d) Optimizing existing sewage treatment plant equipment with the purpose to increase the efficiency of the existing treatment operations, provided that there are no modifications to the works that result in an increase of the approved Rated Capacity, and may have adverse effects to the effluent quality or location of the discharge.
   (e) Replacement, refurbishment of previously approved equipment in whole or in part with Equivalent Equipment, like-for-like of different make and model, provided that the firm capacity, reliability, performance standard, level of quality and redundancy of the group of equipment is kept the same. For clarity purposes, the following equipment can be considered under this provision: pumps, screens, grit separators, blowers, aeration equipment, sludge thickeners, dewatering equipment, UV systems, chlorine contact equipment, bio-disks, and sludge digester systems.

   1.3 Sewage Treatment Plant Outfall: Replacement of discharge pipe with similar pipe size or diffusers provided that the outfall location is not changed.

   1.4 Stormwater Management System:
   (a). Modifications of stormwater management works to service the existing approved drainage area

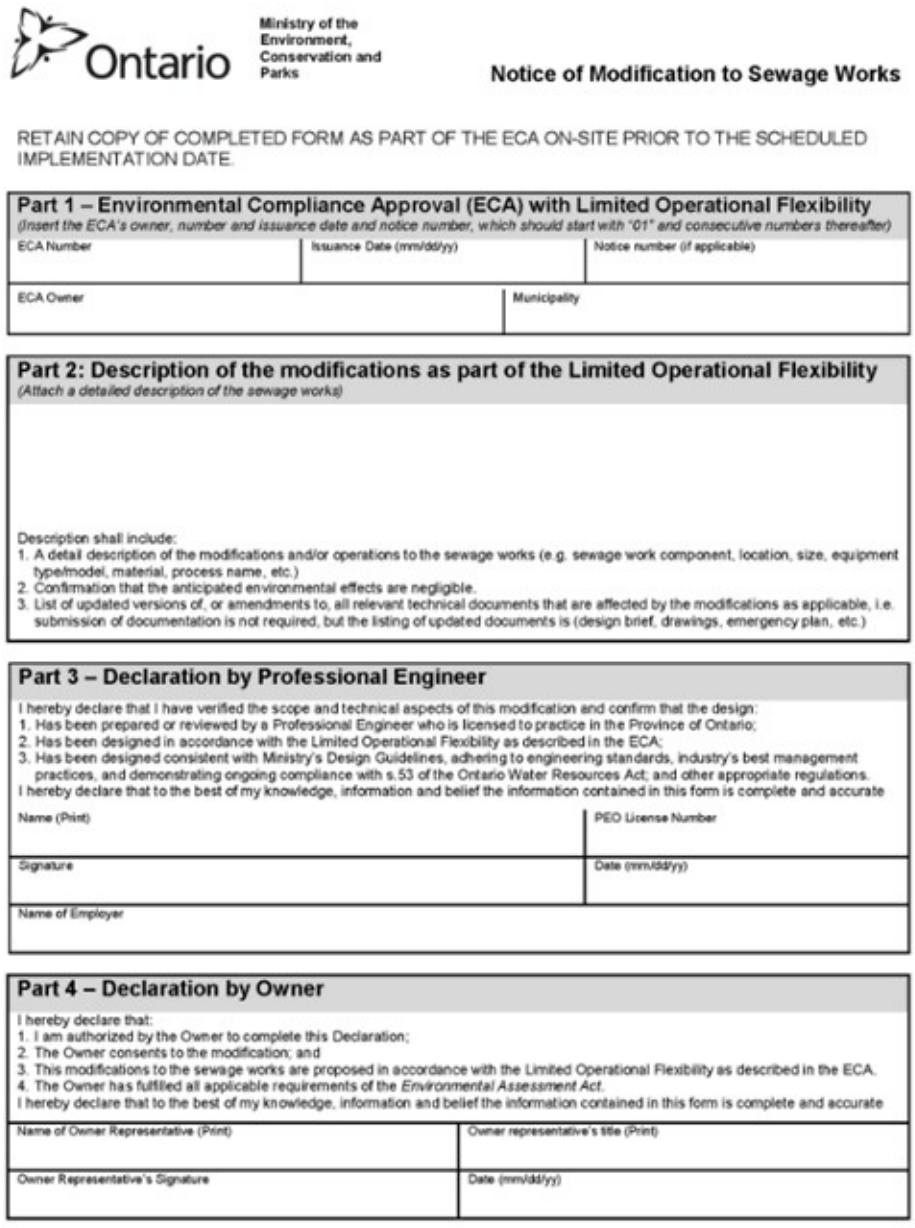
located within the site, provided that there is no increase in the average impervious area established in the original design and the discharges from the site will not exceed the attenuated flows established in the original design.
(b). Installation of new oil grit separators.

1.5 Sanitary Sewers: Pipe relining and replacement with similar pipe size within the Sewage Treatment Plant site, where the nominal diameter is not greater than 1200mm.

1.6 Pilot Systems: 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 sewage treatment plant or hauled off-site for proper disposal,
(b). any effluent from the pilot system discharged to the inlet of the sewage treatment plant or sewage conveyance system 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 does not exceed 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.

2. 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.

This page contains an image of the form entitled "Notice of Modification to Sewage Works". A digital copy can be obtained from the District Manager.



Ontario

Ministry of the Environment, Conservation and Parks

Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA ON-SITE PRIOR TO THE SCHEDULED IMPLEMENTATION DATE.

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)

ECA Owner	Municipality

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)

Description shall include:
1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:
1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name (Print)	PEO License Number

Signature	Date (mm/dd/yy)

Name of Employer

Part 4 – Declaration by Owner

I hereby declare that:
1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. This modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.
4. The Owner has fulfilled all applicable requirements of the *Environmental Assessment Act*.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name of Owner Representative (Print)	Owner representative's title (Print)

Owner Representative's Signature	Date (mm/dd/yy)

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 2692-BVFL4L issued on November 20, 2020 and associated Notice No. 1 issued on January 25, 2021.

In accordance with Section 139 of the *Environmental Protection Act,* you may by written notice served upon me, the Ontario Land Tribunal and in accordance with Section 47 of the *Environmental Bill of Rights,* 1993, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks will place notice of your appeal on the Environmental Registry. Section 142 of the *Environmental Protection Act* provides that the notice

requiring the hearing ("the Notice") shall state:

a. 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;
b. 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 available 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:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. 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:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

and

The Minister of the Environment,
Conservation and Parks
777 Bay Street, 5th Floor
Toronto, Ontario
M7A 2J3

and

The Director appointed for the purposes of
Part II.1 of the *Environmental Protection Act*
Ministry of the Environment,
Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.gov.on.ca**

This instrument is subject to Section 38 of the *Environmental Bill of Rights,* 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at https://ero.ontario.ca/, you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the *Environmental Protection Act.*
DATED AT TORONTO this 6th day of November, 2024

Sherif Hegazy, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

HV/
c: District Manager, MECP Kingston - District
Daniel Davy, INVISTA (Canada) Company