

# Certificate of Property Use

Issued under the authority of the Environmental Protection Act, R.S.O. 1990, c. E.19,  
sections 168.6 (CPU) and 197 (Order)

Certificate of property use number 4086-BMMJFU  
Risk assessment number 0874-AYNVWK

**Owner:** City of Thunder Bay (Owner)  
City Hall  
500 Donald St. E.  
P.O. Box 800  
Thunder Bay, Ontario  
P7C 5K4

**Site:** Proposed Thunder Bay Art Gallery Lease Lands (Property)  
No municipal address  
Thunder Bay, Ontario

**with a legal description as follows:**

Part 1 on Reference Plan 55R-14406

Reference Plan 55R-14406 indicates that Part 1 thereon is a portion of the lands which are identified as PIN 62264-0535(LT) and that Part 1 thereon comprises:

- (a) Part of Lots 19 & 20 and Part of South Water, Town Plot of Prince Arthur's Landing;
- (b) Part of Water Lot in front of Lots 1 1-17 inclusive, South Water Street and in front of Pearl Street, Town Plot of Prince Arthur's Landing;
- (c) Part of Broken Font Opposite Manito Street, Town Plot of Prince Arthur's Landing; and
- (d) Part of Water Lot in front of part of South Water Street between the south limit of Manito Street produced and the limit between Lots 21 and 22 produced southeasterly, Town Plot of Prince Arthur's Landing.

Part 2 on Reference Plan 55R-14406

Reference Plan 55R-14406 indicates that Part 2 thereon is a portion of the lands which are identified as PIN 62499-0070(LT) and that Part 2 thereon comprises part of Location CL 1 1773.

**as outlined on Figure 1: "Plan of Survey" prepared by JD Barnes, dated March 19, 2018, a copy of which is attached hereto in Schedule "B".**

## Summary:

- i) CPU requirements addressed in Part 4 of the CPU, Director Requirements, are summarized as follows:
  - a. Installing/maintaining any equipment Yes
  - b. Monitoring any contaminant Yes
  - c. Refraining from constructing any building specified Yes
  - d. Refraining from using the Property for any use specified Yes
  - e. Other: Maintaining a barrier to site soils and preparing and implementing a soil and ground water management plan and health and safety plan for the Property. Yes
  
- ii) Duration of Risk Management Measures identified in Part 4 of the CPU is summarized as follows:
  - a. The barrier to site soils over the entirety of the Property shall be maintained indefinitely until the Director alters or revokes the CPU.
  - b. The soil and ground water management plan and the health and safety plan shall be required for the Property during any activities potentially in contact with or exposing Impacted Soils or Impacted Ground Water for as long as the Contaminants of Concern are present on the Property.
  - c. All other Risk Management Measures shall continue indefinitely until the Director alters or revokes the CPU.

**The conditions of this Certificate of Property Use (CPU) address the Risk Management Measures in the Risk Assessment noted above and described in detail in Part 1 below (Risk Assessment). In the event of a conflict between the CPU and the Risk Assessment, the conditions of the CPU take precedence.**

## Part 1: Interpretation

Refer to Part 1 of the CPU, Interpretation, for the meaning of all the defined capitalized terms that apply to the CPU.

In the CPU the following terms shall have the meanings described below:

“Act” means the *Environmental Protection Act*, R.S.O. 1990, c. E.19.

“Adverse Effect” has the same meaning as in the Act;

“Building Code” means Ontario Regulation 332/12 (Building Code) as amended to January 1, 2015, made under the *Building Code Act, 1992*, S.O. 1992, c.23.

“Contaminants of Concern” has the same meaning as in O. Reg. 153/04, which, for the Property, means one or more contaminants found on, in or under the Property at a concentration that exceeds the applicable site condition standards for the Property, as specified in section 7 of the Risk Assessment report and in Schedule A of the CPU.

“Certificate of Property Use” or “CPU” means this certificate of property use bearing the number 4086-BMMJFU issued for the Property by the Director under section 168.6 of the Act, as it may be amended from time to time.

“Director” means the undersigned Director or any other person appointed as a Director for the under section 168.6 of the Act.

“EBR” means the *Environmental Bill of Rights, 1993*, S.O. 1993, c. 28.

“Impacted Soil” means soil in which one or more Contaminants of Concern are present at concentrations greater than the Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use Standards for soils within **Table 9 “Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition”** of the *Soil, Ground water and Sediment Standards for Use under Part XV.1 of the Act* published by the Ministry and dated April 15, 2011 for coarse textured soil.

“Impacted Ground Water” means ground water in which one or more Contaminants of Concern are present at concentrations greater than the Non-Potable Ground Water Standards within **Table 9 “Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition”** of the *Soil, Ground water and Sediment Standards for Use under Part XV.1 of the Act* published by the Ministry and dated April 15, 2011 for All Types of Property Use.

“Ministry” means the ministry of the government of Ontario responsible for the administration of the Act, currently named the Ministry of the Environment, Conservation and Parks.

“O. Reg. 153/04” means Ontario Regulation 153/04, “Record of Site Condition – Part XV.1 of the Act” made under the Act.

“Owner” means the owner(s) of the Property, beginning with the person(s) to whom the CPU is issued by the Director under section 168.6 of the Act based on the Risk Assessment, and any subsequent owner(s) of the Property.

“OWRA” means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40.

“Professional Engineer” means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act*, R.S.O. 1990, c. P. 28.

“Property” means the property that is the subject of the Risk Assessment and described in the “Site” section of this CPU.

“Property Specific Standards” means the standards established as the maximum allowable concentrations for the Contaminants of Concern at the Property, as generated by the Approved Model with incorporation of Risk Management Measures, as specified in section 6 of the Risk Assessment report and in Schedule A of the CPU

“Provincial Officer” means a person who is designated as a provincial officer for the purposes of the Act.

“Qualified Person” means a person who meets the qualifications prescribed in subsection 5 (2) of O. Reg. 153/04.

“Risk Assessment” means the Risk Assessment number **0874-AYNVWK** accepted by the Director under section 168.5 of the Act on March 9, 2020 and set out in the following documents:

- **“Pre-Submission Form for Proposed Thunder Bay Art Gallery Lease Lands, Thunder Bay, Ontario” prepared by EXP Services Ltd., dated May 2018**
- **“The Art Gallery of Thunder Bay Risk Assessment, Proposed Thunder bay Art Gallery Lease Lands”, prepared by EXP Services Ltd., April 30, 2019**
- **Revised Table 7-3 for RA1686-18a”, email from Mark Beasy, EXP, received by TASDB with the following document attached:**
  - *Revised THEAG Table 7.pdf*
- **“The Art Gallery of Thunder bay Risk Assessment, Proposed Thunder Bay Art Gallery Lease Lands”, prepared by EXP Services Ltd., September 23, 2019**
- **“Risk Assessment Update – Proposed Thunder Bay Art Gallery (RA1686-18)”, e-mail from Mark Beasy, EXP, received by TADSB October 30, 2019, with the following document attached:**
  - *App\_E\_Data\_Tables\_October\_2019.pdf*
- **“RE: Request for Additional Information – risk Assessment for Proposed Thunder bay art gallery Lease Lands [RA1686-18b; IDS#0874-AYNVWK]”, email from Patricia Videla, EXP Services Ltd, received by TASDB on February 21, 2020, with the following document attached:**
  - *CV – Ruxandra Cote EXP (2019).pdf*
  - *App O-RMP\_Feb\_21.pdf*
  - *App\_E\_Table\_E9.pdf*
  - *App\_F\_P2CSM\_Feb\_2020.pdf*
  - *Part\_A\_Request for Additional Information – Jan-23-20.pdf*
  - *Part\_B\_EXP Response to Comments\_Feb-2020.pdf*
  - *RA\_Section 2.pdf*
  - *RA\_Section 5.pdf*
  - *RA\_Section 7.pdf*
  - *Tables 3\_14a to 3\_14e.pdf*

- *THB-00016140-FE0G.7.pdf*
- *Part\_A\_QP Change Letter.pdf*
- *Part\_B\_CV for RC.pdf*
- *Part\_C\_Bus Contact info for RC.pdf*
- *Part\_D\_Signed Owners Pf.pdf*
- *Part\_E\_QP\_Certs.pdf*

"Risk Management Measures" means the risk management measures specific to the Property described in the Risk Assessment and/or Part 4 of the CPU.

"Tribunal" has the same meaning as in the Act.

"Unimpacted Soil" means soil in which one or more Contaminants of Concern are present at concentrations less than the Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use Standards within **Table 9 "Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition"** of the ***Soil, Ground water and Sediment Standards for Use under Part XV.1 of the Act*** published by the Ministry and dated April 15, 2011 for coarse textured soil.

## **Part 2: Legal Authority**

- 1.1 Section 19 of the Act states that a certificate of property use is binding on the executor, administrator, administrator with the will annexed, guardian of property or attorney for property of the person to whom it was directed, and on any other successor or assignee of the person to whom it was directed.
- 1.2 Subsection 132(1.1) of the Act states that the Director may include in a certificate of property use a requirement that the person to whom the certificate is issued provide financial assurance to the Crown in right of Ontario for any one or more of:
  - (a) the performance of any action specified in the certificate of property use;
  - (b) the provision of alternate water supplies to replace those that the Director has reasonable and probable grounds to believe are or are likely to be contaminated or otherwise interfered with by a contaminant on, in or under the property to which the certificate of property use relates; and
  - (c) measures appropriate to prevent adverse effects in respect of the property to which the certificate of property use relates.
- 1.3 Section 168.6(1) of the Act states that if a risk assessment related to the property has been accepted under clause 168.5(1)(a), the Director may issue a certificate of property use to the owner of the property, requiring the owner to do any of the following things:

1. Take any action that is specified in the certificate and that, in the Director's opinion, is necessary to prevent, eliminate or ameliorate any adverse effect that has been identified in the risk assessment, including installing any equipment, monitoring any contaminant or recording or reporting information for that purpose.
  2. Refrain from using the property for any use specified in the certificate or from constructing any building specified in the certificate on the property.
- 1.4 Subsection 168.6(2) of the Act states that a certificate of property use shall not require an owner of property to take any action that would have the effect of reducing the concentration of a contaminant on, in or under the property to a level below the level that is required to meet the standards specified for the contaminant in the risk assessment.
- 1.5 Subsection 168.6(3) of the Act states that the Director may, on his or her own initiative or on application by the owner of the property in respect of which a certificate has been issued under subsection 168.6(1),
- (a) alter any terms and conditions in the certificate or impose new terms and conditions; or
  - (b) revoke the certificate.
- 1.6 Subsection 168.6(4) of the Act states that if a certificate of property use contains a provision requiring the owner of property to refrain from using the property for a specified use or from constructing a specified building on the property,
- (a) the owner of the property shall ensure that a copy of the provision is given to every occupant of the property;
  - (b) the provision applies, with necessary modifications, to every occupant of the property who receives a copy of the provision; and
  - (c) the owner of the property shall ensure that every occupant of the property complies with the provision.
- 1.7 Subsection 197(1) of the Act states that a person who has authority under the Act to make an order or decision affecting real property also has authority to make an order requiring any person with an interest in the property, before dealing with the property in any way, to give a copy of the order or decision affecting the property to every person who will acquire an interest in the property as a result of the dealing.
- 1.8 Subsection 197(2) of the Act states that a certificate setting out a requirement imposed under subsection 197(1) may be registered in the proper land registry office on the title of the real property to which the requirement relates, if the certificate is in a form approved by the Minister, is signed or authorized by a person who has authority to make orders imposing requirements under subsection 197(1) and is accompanied by a registrable description of the property.

- 1.9 Subsection 197(3) of the Act states that a requirement, imposed under subsection 197(1) that is set out in a certificate registered under subsection 197(2) is, from the time of registration, deemed to be directed to each person who subsequently acquires an interest in the real property.
- 1.10 Subsection 197(4) of the Act states that a dealing with real property by a person who is subject to a requirement imposed under subsection 197(1) or 197(3) is voidable at the instance of a person who was not given the copy of the order or decision in accordance with the requirement.

### Part 3: Background

- 1.1 The Risk Assessment was undertaken for the Property on behalf of the Owner to assess the human health risks and ecological risks associated with the presence or discharge of contaminants on, in or under the Property and to identify appropriate Risk Management Measures to be implemented to ensure that the Property is suitable for the intended use: “parkland use” and “institutional use”, as defined in O. Reg. 153/04. The Property currently consists of undeveloped, open space. Historically, the Property had multiple industrial and commercial uses, including coal yard(s), sawmill(s), machine shop, lumber yard, tractor repair shop, and railway line, as outlined in Figure 2 in Schedule “B”. The Property is currently unused, with the Property having been most recently used for industrial use.
- 1.2 The Contaminants of Concern on, in or under the Property that are present above the **Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use** for soils within **Table 9 “Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition”** or for ground water within **Table 7 “Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition”** or **Table 9 “Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition”** of the *Soil, Ground water and Sediment Standards for Use under Part XV.1 of the Act* published by the Ministry and dated April 15, 2011 for coarse, medium and fine textured soil. The Property Specific Standards for the Contaminants of Concern are set out in Schedule “A” attached to and forming part of the CPU.
- 1.3 The following Schedules form part of this CPU:
- Schedule “A” – Property Specific Standards
    - Table 6-1: Recommended Property Specific Standards in Soil
    - Table 6-2: Recommended Property Specific Standards in Groundwater
  - Schedule “B” – Figures
    - Figure 1: “Plan of Survey” by JD Barnes, dated March 19, 2018
    - Figure 2: “Site Plan and APECs” by EXP, dated February 2019

- Figure O.1: “Risk Assessment Measures – Soil Cover System” by EXP, dated February 2019
- Figure O.2: “Conceptual Soil Direct Contact Engineering RMM Details” by EXP, dated February 2019
- Figure O.3: “Vapour Mitigation System” by EXP, dated August 8, 2019
- Figure O.4: “Vapour Mitigation System” by EXP, dated August 8, 2019
- Figure G.7: “Landscaping Restriction Area” by EXP, dated February 2019

Schedule “C” – Table 7-5: Sub-Slab Vapour Criteria

Schedule “D” – Certificate of Requirement

- 1.4 I am of the opinion, for the reasons set out in the Risk Assessment that the Risk Management Measures described therein and outlined in Part 4 of the CPU are necessary to prevent, eliminate or ameliorate an Adverse Effect on the Property that has been identified in the Risk Assessment.
- 1.5 The Risk Assessment indicates the presence of Contaminants of Concern in soil and ground water which requires on-going restrictions on land use and pathway elimination. As such, it is necessary to restrict the use of the Property, impose building restrictions, and implement Risk Management Measures as set out in the Risk Assessment and in Part 4 of the CPU.

## **Part 4: CPU Risk Management Measures and Requirements Relating to the Risk Assessment and the Property**

**I hereby require the Owner to do or cause to be done the following under the authority of paragraph 168.6(1)1 of the Act:**

### Risk Management Measures

- 1.1 Implement, and thereafter maintain or cause to be maintained, the Risk Management Measures.
- 1.2 Without restricting the generality of the foregoing in Item 4.1, carry out or cause to be carried out the following key elements of the Risk Management Measures. The performance objectives of the Risk Management Measures are as follows:
  - block soil exposure pathways for human receptors and ecological receptors;
  - block soil and groundwater vapour pathways for new buildings to be developed at the Site;
  - block groundwater pathways for human receptors; and



- establish inspection and monitoring programs to evaluate the effectiveness of the Risk Management Measures.

### 1.2.1 RISK MANAGEMENT BARRIER

The Property shall be covered by a physical barrier where there is less than 1.0 m of Unimpacted Soil between the ground surface and Impacted Soil. The barrier shall be designed, installed and maintained in accordance with the Risk Assessment so as to prevent exposure to the Contaminants of Concern. The barrier to Impacted Soils shall consist of a clean soil cap (fill cap), hard cap and/or fence as specified below:

- i. Covering of all areas of the Property where Property Specific Contaminants of Concern are present at or within 1.0 m below the soil surface such that Hard Caps (asphalt and granular sub-base, concrete sidewalks/foundation and granular sub-base), Cobble/Clean Granular Cap and Soft Caps (standard fill cap, shallow fill cap for tree preservation and restricted vegetation cap) (see Figure O.2) are in place in these areas, so as to prevent exposure to the Property Specific Contaminants of Concern at the Property, in conjunction with any existing Barriers in any other areas of the Property where Property Specific Contaminants of Concern are present below the soil surface;
- ii. Before commencing development of all or any part of the Property, installing fencing and implementing dust control measures for any part of the Property requiring covering but which has not been covered, so as to restrict access to the part fenced and prevent exposure to the Property Specific Contaminants of Concern at the Property, with the fencing and dust control measures to be maintained until covering of the part fenced is complete;
- iii. Preparing and implementing a written inspection and maintenance program, prepared by a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, so as to ensure the continuing integrity of each Barrier at the Property so long as the Property Specific Contaminants of Concern are present at the Property, including, at a minimum:
  - (a) procedures and timing for implementing the program;
  - (b) semi-annual inspections, in spring and fall, of the Barrier;
  - (c) noting any deficiencies in the Barrier observed during the inspections, or at any other time;
  - (d) repairing promptly any such deficiencies, to the original design specifications, with written confirmation by a Licensed Professional Engineer that the Barrier has been properly repaired, to be retained by

the Owner and be available for inspection upon request by a Provincial Officer;

- (e) contingency measures, such as fencing, to be implemented if cracks, breaches or any loss of integrity of the Barrier cannot be repaired or addressed in a timely manner, to prevent exposure to the Property Specific Contaminants of Concern in that area of the Property; and
- (f) recording, in writing, all inspections, deficiencies, repairs and implementation of contingency measures, to be retained by the Owner and be available for inspection upon request by a Provincial Officer;

and which is,

- (g) delivered to the Owner before use of all or any part of the Property begins, or within 90 days following completion of covering of all or any part of the Property, whichever is earlier; and
  - (h) updated and delivered to the Owner within 30 days following making any alteration to the program;
- iv. Preparing a site plan of the entire Property, prepared by a Licensed Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, showing the Property, any fencing, and the location, type and design of each Barrier at the Property, including cross-sectional drawings of the Barrier showing its design and vertical and lateral extent;
  - v. Preparing and implementing written procedures, prepared by Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, for written and oral communication to all persons who may be involved in Intrusive Activities at the Property that may disturb a Barrier at the Property, so as to ensure the persons are made aware of the presence and significance of the Barrier and the Property Specific Contaminants of Concern at the Property and the precautions to be taken to ensure the continued integrity of the Barrier when undertaking the Intrusive Activities, and if damaged, to ensure that the Barrier is repaired promptly to the original design specifications, or, if it cannot be repaired promptly, to ensure that the contingency measures are implemented, and records kept, as specified in the inspection and maintenance program;
  - vi. The Hard Cap shall meet the following minimum requirements, as illustrated in Figure O.2 Detail 1 and Detail 2:
    - (a) Asphalt, concrete, a building slab, or a building foundation and floor slab, consisting of at least 150 millimetres of granular sub-base or equivalent material overlain by at least 75 millimetres of hot mix asphalt or concrete;

- vii. The Fill Cap shall meet the following minimum requirements, as illustrated in Figure O.2 Detail 4:
  - (a) 1.0 metre of Unimpacted Soil or non-soil fill, overlying a geotextile layer;
- viii. The Loose Cobble Cap applies to open lands without vegetation cover for the purpose of providing partially naturalized walking trails in the parkland portions of the Property, and shall meet the following minimum requirements, as illustrated in Figure O.2 Detail 3:
  - (a) A minimum of 50 centimetres of cobble or clean granular material (with or without a Hard Cap as described in Item 4.2.1.vi), overlying a geotextile layer;
- ix. The Shallow Fill Cap for the purpose of preserving existing mature, healthy trees on the Property, as illustrated in Figure O.1, shall meet the following minimum requirements, as illustrated in Figure O.2 Detail 6:
  - (a) Where forested stands of healthy trees are present on the Property, capping of the area within the trees' drip lines with at least 10 centimetres of Unimpacted Soil or non-soil fill, overlying a geotextile layer; and
  - (b) Where single mature, healthy trees are present on the Property, capping of areas within the trees' drip lines with at least 30 centimetres of Unimpacted Soil or non-soil fill, overlying a geotextile layer;
- x. The Restricted Vegetation Fill Cap applies to lands in which only plants with maximum root depths of less than 30 centimetres may be planted, and shall meet the following minimum requirements, as illustrated in Figure O.2 Detail 7:
  - (a) A minimum of 30 centimetres of Unimpacted Soil or non-soil fill, overlying a geotextile layer;
- xi. Where new deep-rooting vegetation is to be planted, there shall be a minimum of 1.5 metres of unimpacted soil or non-soil fill overlying a geotextile layer, as illustrated in Figure O.2 Detail 5;
- xii. Where suitable existing shoreline that provides adequate protection from waves, ice and debris is not present, appropriate riprap, or equivalent material, will be installed to protect the shoreline and physical barrier; and
- xiii. A site plan, prepared and signed by a qualified person, retained by the Owner and made available for review by a Provincial Officer upon request, as amended from time to time following the completion of any alteration to the capping, shoreline protection or any fencing, which describes:

- (a) The Property; and
- (b) The placement of the capping, shoreline protection and any fencing on the Property;

and which includes:

- (c) Cross-sectional drawings specifying the vertical and lateral extent of the capping and shoreline protection, and the location of any fencing.

#### 1.2.2 BARRIER INSPECTION AND MAINTENANCE PROGRAM

An inspection and maintenance program shall be prepared and implemented upon issuance of the CPU to ensure the continuing integrity of risk management barriers (including any fence barrier) as long as the Contaminants of Concern are present on the Property. The inspection program shall include, at a minimum, semi-annual (spring and fall) inspections to assess the integrity of the barrier. Any deficiencies of the barrier shall be repaired forthwith to meet the requirements as set out in Item 4.2.1. Inspection, deficiencies and repairs shall be recorded in a log book maintained by the Owner and made available upon request by a Provincial Officer.

#### 1.2.3 BUILDING RESTRICTIONS

The bottom of any building slab shall be above the original grade, as provided in Figure O.3 and Figure O.4 Detail 9.

#### 1.2.4 SOIL AND GROUND WATER MANAGEMENT PLAN

A soil and ground water management plan shall be prepared for the Property and implemented during any activities potentially coming in contact with or exposing Impacted Soils and/or Impacted Ground Water to ensure that any Impacted Soil excavated or Impacted Ground Water removed from the Site is appropriately and safely managed. A copy of the plan shall be kept by the Owner and made available for review by a Provincial Officer upon request. Implementation of the plan shall be overseen by a Qualified Person and shall include, but not be limited to, provisions for soils excavation, stockpiling, characterization, dewatering and management of Impacted Ground Water, disposal and record keeping specified below and as outlined in the Risk Assessment:

- i. Dust control measures and prevention of soil tracking by vehicles and personnel from the Property, which may include wetting of soil with potable water, reduced speeds for on-site vehicles, tire washing stations and restricting working in high wind conditions, as required;
- ii. Management of excavated materials, which may include cleaning equipment, placement of materials for stockpiling on designated areas lined and covered with polyethylene sheeting, bermed and fenced to prevent access, runoff

control to minimize contact and provisions for discharge to sanitary sewers or other approved treatment, as required;

- iii. Dewatering and ground water management during any ground intrusive activities that extend into the ground water table at the Property;
- iv. Characterization of excavated soils and collected ground water to determine if soil or ground water exceeds the Property Specific Standards and shall follow the sampling strategy as described in Section 7.5.3 in the Risk Assessment;
- v. Excavated soils meeting the Property Specific Standards may be placed on the Property below the risk management barrier if deemed suitable by a Qualified Person and in accordance with the Risk Assessment;
- vi. Excavated soils and materials (including collected ground water) requiring off-site disposal as a waste shall be disposed of in accordance with the provisions of O. Reg. 347, as amended, made under the Act; and
- vii. Record keeping including dates and duration of work, weather and site conditions, location and depth of excavation activities, dust control measures, stockpile management and drainage, soil and ground water characterization results, names of the Qualified Person, contractors, haulers and receiving sites for any soil or contaminated ground water removed from the Property and any complaints received relating to site activities potentially coming in contact with or exposing site soils and ground water.

#### 1.2.5 HEALTH AND SAFETY PLAN

A site-specific health and safety plan shall be developed for the Property and implemented during all intrusive, below-grade construction activities potentially coming in contact with or exposing Impacted Soil or Impacted Ground Water and a copy shall be maintained on the Property for the duration of these intrusive activities. The Owner shall ensure that the health and safety plan takes into account the presence of the Contaminants of Concern, is designed to reduce or eliminate exposures to vapours in trench air, and is implemented prior to any intrusive work being done on the Property in order to protect workers from exposure to the Contaminants of Concern. The health and safety plan shall be prepared in accordance with applicable Ministry of Labour health and safety regulations, shall address any potential risks identified in the Risk Assessment, and shall include, but not be limited to, occupational hygiene requirements, requirements for personal protective equipment, and contingency plan requirements including site contact information. Prior to initiation of any project (as defined in the Occupational Health and Safety Act, as amended) on the Property, the local Ministry of Labour office shall be notified of the proposed activities and that the Property contains contaminated soil and ground water. Implementation of the health and safety plan shall be overseen by persons qualified to review the provisions of the plan with respect to the proposed site work and conduct daily

inspections. The Owner shall retain a copy of the plan, which shall be made available to a Provincial Officer upon request.

#### 1.2.6 FUTURE SITE DEVELOPMENT

All Impacted Soil and Impacted Ground Water encountered during future site development must be characterized per the Risk Assessment and if remediation is required, upon completion, a summary report completed by a Qualified Person shall be retained by the Owner and be available to a Provincial Officer upon request. The summary report shall include the following:

- i. The dates and duration of work completed;
- ii. A summary of the work completed;
- iii. A site plan showing the location of the work; and
- iv. Material characterization results and confirmatory sampling results, including copies of the laboratory certificates of analysis.

#### 1.2.7 PASSIVE SOIL VAPOUR INTRUSION MITIGATION SYSTEM (SVIMS)

The Owner shall ensure that no future enclosed structures are constructed on the Property unless the building is equipped with a passive soil vapour intrusion mitigation system designed by a professional engineer licenced to practise in the Province of Ontario and signed off confirming that the design is suitable for its intended purpose. A copy of the final design including drawings and specifications, as well as, the sign-off by the professional engineer shall be provided to the Director prior to implementation, including as-built drawings. The conceptual design for the SVIMS as outlined in the Risk Assessment is as follows:

##### DESIGN, INSTALLATION AND OPERATION

- i. Designing, installing and operating a Passive SVIMS for the Building, designed by a Licenced Professional Engineer in consultation with a Qualified Person and installed by a person acceptable to and under the supervision of a Licenced Professional Engineer, so as to remove soil vapour from below the Building and prevent soil vapour containing the Property Specific Contaminants of Concern from entering the Building air, including the following requirements and components for the Passive SVIMS:

##### SYSTEM REQUIREMENTS

(a) The Passive SVIMS is to:

1. be designed, installed and operated with the objective of achieving during all seasons a lower air pressure differential below the foundation floor slab, relative to the indoor air pressure within the Building, across at least 90% of the Building Area;

2. be able to be readily converted to operation as an Active SVIMS, if necessary, to ensure soil vapour is being sufficiently removed from below the Building, including making provision to readily allow installation and operation of an electrical powered fan on each vent riser, with the objective of achieving during all seasons at least a 6 Pascal lower air pressure differential below the foundation floor slab, relative to the indoor air pressure within the Building, across at least 90% of the Building Area, and making provision for an automated monitoring system of electrical fan operation which remotely detects and indicates system malfunctions; and
3. have in place or be able to easily put in place, measures, as appropriate based on an assessment carried out in accordance with ASTM E1998, to prevent potential depressurization induced back drafting and spillage of combustion products from vented combustion appliances that may be in the Building, in the event conversion to operation as an Active SVIMS is necessary;

#### SUB-SLAB FOUNDATION LAYER

- (b) throughout the Building Area below the foundation floor slab, a sub-slab foundation layer, above soil containing the Property Specific Contaminants of Concern, designed by a Licenced Professional Engineer for the Building constructor in consultation with the Licenced Professional Engineer for the Passive SVIMS;

#### SOIL VAPOUR VENTING LAYER

- (c) throughout the Building Area below the foundation floor slab and above the sub-slab foundation layer, a soil vapour venting layer designed for collection and venting of soil vapour from below the floor slab to vent risers for venting to the outdoor air, with the soil vapour venting layer consisting of:
  1. perforated collection pipes or geocomposite strips of sufficient size or diameter, frequency and locations to promote efficient collection and venting, embedded in granular materials of sufficient air permeability and depth;
  - or,  
other soil vapour collection and venting products used to construct a soil vapour venting layer with continuous open void space, such as an aerated sub-floor below the floor slab and around the exterior walls, which provides similar or greater air permeability and collection and venting efficiency;
  2. for a Building with isolated soil vapour venting layer areas caused by interior grade beams or areas of thickened slabs, ventilation pipes to connect the isolated areas or a soil vapour venting layer that extends below these elements of the Building foundation; and

3. clean-outs, drains or openings to ensure drainage and removal of condensate or water, including any entrained dust, that may enter collection pipes, geocomposite strips or vent risers, and, if required, to ensure drainage or dewatering of the soil vapour venting layer in Property areas with a shallow ground water table;

#### SOIL VAPOUR BARRIER MEMBRANE

- (d) throughout the Building Area, a continuous leak free soil vapour barrier membrane, such as a sheet geomembrane or spray applied membrane, below the foundation floor slab and above the soil vapour venting layer, and below and along the walls of any subsurface structures such as a sump, and which:
  1. is of appropriate thickness and meets the appropriate gas permeability and chemical resistance specifications to be considered substantially impermeable to the soil vapour, in accordance with the appropriate ASTM standards such as D412 and D543, as applicable; and
  2. has a suitable protective geotextile, or other suitable protective material, such as a sand layer, immediately below or above the soil vapour barrier membrane, as considered appropriate by the Licenced Professional Engineer;

#### VENT RISERS

- (e) vent risers of sufficient size or diameter, frequency and locations to promote efficient venting and that terminate above the roof of the Building, to convey soil vapour from the soil vapour venting layer to the outdoor air above the roof of the Building and that discharge at an appropriate distance, consistent with the separation provisions in ASTM E2121 but modified as appropriate for the characteristics of the soil vapour and Building, from Building air intakes and openable windows, doors and other openings through which exhausted vapours could be entrained in Building air, including:
  1. at least one vent riser per isolated section of the soil vapour venting layer caused by interior grade beams or thickened slabs, unless analysis or testing indicates a lesser number of vent risers is required;
  2. vent pipe riser diameter that is greater than the collection pipe diameter, to promote efficient venting;
  3. vent risers located within the Building, where appropriate, to promote temperature induced convective venting during colder weather; and



4. a wind turbine or solar powered wind turbine on each vent riser (and if an Active system is necessary, an electrically powered fan on each vent riser, and a monitoring system of fan operation which detects and indicates system malfunctions);

#### MONITORING DEVICES

- (f) monitoring devices installed below the foundation floor slab across the Building Area for measurement of the (lower) air pressure differential, relative to the indoor air pressure within the Building, being achieved by the soil vapour venting layer, with the number and locations of the monitoring devices installed being as considered appropriate by the Licensed Professional Engineer in consultation with the Qualified Person, taking into account factors such as the Building Area and the design and configuration of the Building foundation;

#### LABELLING OF EQUIPMENT

- (g) labeling of equipment for the Passive SVIMS, including information such as the installer's name, date of installation and identification of all visible piping, consistent with the labeling provisions in ASTM E1465 but modified as appropriate for the characteristics of the soil vapour and Building;

#### UTILITY SEALING

- (h) where utilities or subsurface Building penetrations are a potential conduit for soil vapour migration,
  1. utility trench dams, consisting of a soil-bentonite mixture, sand-cement slurry or other appropriate material, installed as a precautionary measure to reduce the potential for soil vapour to migrate beneath the Building through relatively permeable trench backfill; and
  2. conduit seals constructed of closed cell polyurethane foam, or other approved inert gas-impermeable material at the termination of all utility conduits and at subsurface Building penetrations, such as sumps, to reduce the potential for vapour migration along the conduit to the interior of the Building;

#### QUALITY ASSURANCE/QUALITY CONTROL

- ii. Preparing and implementing a quality assurance and quality control program, prepared by a Licenced Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, so as to ensure that the Passive SVIMS is being and has been properly installed and the installation documented, including inspections, verification testing and documenting of the installation as it is carried out, including at a minimum:

- (a) procedures and timing for implementing the program, by a person acceptable to and under the supervision of a Licenced Professional Engineer;
- (b) daily inspections of the installation of the Passive SVIMS, including of the quality assurance and quality control measures and procedures undertaken by the installer;
- (c) undertaking, at a minimum, the following quality control measures and verification testing of the soil vapour barrier membrane:
  - 1. daily inspections noting any deficiencies and corrective actions taken;
  - 2. smoke testing of the soil vapour barrier membrane, or equivalent alternative testing method that provides comparable results, as per soil vapour barrier membrane manufacturer recommendation;
  - 3. verification of the type and thickness of the soil vapour barrier membrane through testing of representative samples of materials used, including destructive testing and repair of portions of the membranes to be conducted in a manner and at a frequency that meets or exceeds manufacturer's recommendations;
  - 4. verification of field seams of sheet geomembranes as being continuous and leak free through vacuum or pressure testing, geophysical testing or other appropriate means; and
  - 5. verification that appropriate measures to prevent post-construction damage or degradation to the soil vapour barrier membrane have been taken, including at a minimum, appropriate preparation of the sub-slab foundation layer, placement of a protective geotextile, or other suitable protective material, below or above the soil vapour barrier membrane, if included in the design, and work practices to prevent post-construction damage;
- (d) noting any deficiencies in the materials or installation of the Passive SVIMS;
- (e) ensuring the prompt repair of any deficiencies, to the design specifications and according to the manufacturer recommendation;
- (f) preparing a written report of all inspections, quality control measures and verification testing undertaken, and any deficiencies and repairs, prepared by the Licenced Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer;

and which is,

- (g) delivered to the Owner before installation of the Passive SVIMS begins;  
and
- (h) updated and delivered to the Owner within 30 days of making any alteration to the program;

#### AS CONSTRUCTED PLANS

- iii. Preparing as constructed plans of the Passive SVIMS, prepared by a Licenced Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, showing the location of the Building and the location and specifications of the installed Passive SVIMS, including cross-sectional drawings specifying the design and the vertical and lateral extent of the Passive SVIMS relative to the Building and the ground surface, and which is:
  - (a) delivered to the Owner before use of all or any part of the Building begins, or within 90 days following completion of installation of the Passive SVIMS, whichever is earlier; and
  - (b) updated, and delivered to the Owner within 30 days following making any alteration to the Passive SVIMS, or other relevant feature shown on the plans;

#### INSPECTION AND MAINTENANCE

- iv. Preparing and implementing a written inspection and maintenance program, prepared by a Licenced Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, to ensure the continued integrity and effectiveness of the Passive SVIMS, including, at a minimum:
  - (a) procedures and timing for implementing the program, by a person meeting the qualifications as set out in the program;
  - (b) maintenance and calibration of operational, monitoring and other equipment, as appropriate;
  - (c) inspections of the Passive SVIMS, including:
    1. semi-annual inspections, in spring and fall, of the visible areas of the foundation floor slab or subsurface walls in contact with soil to identify any cracks, breaches or other deficiencies that may allow soil vapour to enter the Building;
    2. semi-annual inspections, in spring and fall, of the visible components of the Passive SVIMS to identify any cracks, breaches or other deficiencies that may hinder the collection or venting of soil

vapour from below the Building;

3. additional inspections, on a more frequent basis as appropriate, of the wind turbine(s) or solar powered wind turbine(s) to determine whether they turn freely, to confirm the monitoring system and fan is operational and to confirm operational parameters; and
  4. additional inspections, during winter, as appropriate, to identify any significant accumulation of snow or ice requiring removal;
- (d) noting any deficiencies or concerns with the floor slab and Passive SVIMS identified during any inspection, or at any other time;
  - (e) repairing promptly any deficiencies, including under the supervision of a Licenced Professional Engineer for a deficiency referred to in part iii. (b) above;
  - (f) factors and considerations for determining if additional inspections or monitoring should be undertaken;
  - (g) a contingency plan to be implemented in the event the deficiencies cannot be repaired promptly, including factors and considerations for determining if the Passive SVIMS needs to be converted to operation as an Active SVIMS, and including prompt notification of the Ministry of such deficiencies, along with operational monitoring results and any additional lines of evidence suggest that soil vapour intrusion into the Building may occur, as determined by a Licenced Professional Engineer; and
  - (h) preparing a written report of all inspections, deficiencies, repairs and maintenance, and of implementation of the contingency plan if necessary, prepared by a Licenced Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer;

and which is

- (i) delivered to the Owner before use of all or any part of the Building begins, or within 90 days following completion of installation of the Passive SVIMS, whichever is earlier; and
- (j) updated and delivered to the Owner within 30 days following making any alteration to the program;

#### OPERATIONAL MONITORING

- v. Preparing and implementing a written program for monitoring of the operation of the Passive SVIMS, prepared by a Licenced Professional

Engineer in consultation with a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, to ensure the continued integrity and effectiveness of the Passive SVIMS, including, at a minimum:

- (a) procedures and timing for implementing the program, by a person meeting the qualifications as set out in the program;
- (b) locations and description of the devices and equipment used, or tested, for each monitoring event;
- (c) procedures for undertaking the testing, measurement and evaluation during a monitoring event, including calibration of operational, monitoring and other equipment, as appropriate;
- (d) undertaking operational monitoring, including the recording of the monitoring results, in accordance with the following:
  - 1. at least once before occupancy and as considered appropriate by the Licenced Professional Engineer after occupancy has commenced, vacuum testing of the soil vapour venting system by conducting pilot testing using temporary electrically powered fan(s), including with respect to the soil vapour venting layer being able to achieve, in the event conversion to operation as an Active SVIMS is necessary, a 6 Pascal lower air pressure differential objective below the foundation floor slab across the Building Area, relative to the indoor air pressure within the Building; and
  - 2. at least once before occupancy, quarterly during the first two years after occupancy has commenced and semi-annually thereafter (in two different seasons with winter included), measuring of the (lower) air pressure differential below the foundation floor slab across the Building Area, relative to the indoor air pressure within the Building, being achieved by the soil vapour venting layer, using all of the monitoring devices, including those referred to in part (f) of section i. above;
- (e) for each year, undertaking an assessment and preparing a written monitoring report, by a Licenced Professional Engineer in consultation with a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, on the operational monitoring undertaken and its results and findings with respect to the integrity and effectiveness of the installed Passive SVIMS, including taking into account previous monitoring undertaken, and with recommendations and any follow-up actions to be taken, such as:
  - 1. the need to repeat or undertake additional or follow-up operational monitoring, and assessment, or additional inspections;

2. changes to the frequency or nature of the monitoring;
3. the need to make repairs or changes to the design or operation of the Passive SVIMS; and
4. if necessary, implementation of the contingency plan, as outlined in Item 4.2.7.vi, including if the Passive SVIMS needs to be converted to operation as an Active SVIMS, in the event needed repairs or changes to the Passive SVIMS cannot be made promptly, including notification of the Ministry if the operational monitoring results, inspections and any additional lines of evidence suggest that soil vapour intrusion into the Building may occur, as determined by a Licenced Professional Engineer;

and which is,

- (f) delivered to the Owner before use of all or any part of the Building begins, or within 90 days following completion of installation of the Passive SVIMS, whichever is earlier; and
- (g) updated and delivered to the Owner within 30 days of following making any alteration to the program;

#### OPERATIONAL MONITORING CONTINGENCY

- vi. Contingency measures shall be implemented in the event that, through the monitoring described in section v above, a failure is observed. A failure occurs when one (1) or more monitoring ports exhibit a positive pressure differential or a negative pressure differential of 6 Pascals or less. The proposed contingency measures shall include the development and implementation of an action plan providing mitigation measures, and shall include, at a minimum:
  - a) If the measured pressure differentials are not within the specification provided above, then an additional check of the vapour mitigation system and associated equipment (e.g., exhaust fans, piping, etc.) will be conducted, followed by repairs, if necessary, and an additional round of pressure differential monitoring. This inspection and confirmatory monitoring shall be conducted by appropriately trained personnel under direction of a Professional Engineer within one (1) month of the discovery of the failure;
  - b) In the event the confirmatory pressure differential measurements verify that inadequate depressurization is present beneath the building, soil vapour sampling shall be conducted at a minimum of three (3) sub-slab monitoring probes, within one (1) month of the identification of failure of the confirmatory monitoring event;

- c) If the concentration of one or more target analytes exceeds the Sub-Slab Vapour Criteria (SSVC) as outlined in Table 7-5 of the CPU, a confirmatory sub-slab vapour (SSV) sample shall be collected. The confirmatory SSV sampling event shall be conducted within one (1) month of the previous sampling round, and samples shall be collected from the locations where the previous soil vapour concentration exceeded the SSVC; and
- d) Sub-slab vapour samples shall be collected using Summa™ canisters prepared and certified by an analytical laboratory and shall be analyzed using EPA Method TO-15. However, heavier PAHs shall be addressed via thermal desorption tubes and shall be analyzed using EPA Method TO-17, where appropriate.

#### INTRUSIVE ACTIVITIES CAUTION

- vii. Preparing and implementing written procedures, prepared by a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, for written and oral communication to all persons who may be involved in Intrusive Activities at the Property that may disturb an installed Passive SVIMS, so as to ensure the persons are made aware of the presence and significance of the Passive SVIMS and the Property Specific Contaminants of Concern at the Property and the precautions to be taken to ensure the continued integrity of the Passive SVIMS when undertaking the Intrusive Activities, and if damaged, to ensure the Passive SVIMS is repaired promptly to the original design specifications, or if it cannot be repaired promptly, to ensure the contingency measures are implemented, and records kept, as specified in the inspection and maintenance program;

and which are,

- (a) delivered to the Owner before any Intrusive Activities are undertaken at the Property; and
- (b) updated and delivered to the Owner within 30 days following making any alteration to the procedures;

#### BUILDING CODE

- viii. The Building complies with all applicable requirements of the Building Code, such as the provisions governing the following:
  - (a) soil gas control as set out in Division B, subsection 9.13.4. (Soil Gas Control) of the Building Code;
  - (b) protection against depressurization as set out in Division B, Article 9.32.3.8. (Protection Against Depressurization) of the Building Code; and

- (c) separation of air intakes and exhaust outlet openings and protection against contamination of the ventilation air by the exhaust air as set out in Division B, Article 9.32.3.12. (Outdoor Intake and Exhaust Openings) of the Building Code; and

#### APPROVALS

- ix. The implementation of an SVIMS is a potential source of contaminated air emissions. As set out under O. Reg. 419/05, as amended, there are requirements for the operation of processes and equipment that may discharge contaminants to the atmosphere. In accordance with the requirements of O. Reg. 419/05, as amended, an application will have to be made to the Ministry for an Environmental Compliance Approval (ECA) or Environmental Activity and Sector Registry (EASR) for the operation of an SVIMS.

#### 1.2.8 PROHIBITION ON GROUND WATER USE

Upon issuance of the CPU, the Owner shall take all actions necessary or advisable to prevent any use of ground water in or under the Property as a water source, including:

- i. Properly abandon according to applicable law all wells at the Property which are or can be used as a water source except those that are to be maintained and utilized as part of a ground water monitoring program; and
- ii. Refrain from constructing on the Property any well which can be used as a water source.

#### 1.2.9 DEEP ROOTING VEGETATION

New plantings of deep-rooting vegetation, such as trees, shrubs; or any other vegetation not in planters or raised beds, may not be planted within the area shown in Figure G.7

#### 1.2.10 SITE PLAN

The Owner shall submit a site plan prepared and signed by a Qualified Person prior to use of any future site development which will describe the Property, the proposed development and the location of the specified Risk Management Measures noted above. This site plan shall be submitted to the Director and the Owner shall retain one copy for inspection upon request by a Provincial Officer. The site plan shall be revised and resubmitted to the Director following the completion of any changes to the development.

#### 1.2.11 SITE RESTORATION PLAN

A site restoration plan shall be developed and implemented for the Property prior



to any development activities that may disturb the risk management barrier. This plan shall include the steps to repair/replace the barrier to meet the requirements set out under Item 4.2.1 above. A log of steps taken to implement the plan shall be maintained and be available upon request by a Provincial Officer. The plan shall also be made available upon request by a Provincial Officer.

#### 1.2.12 ANNUAL REPORT

The Owner shall prepare by March 31<sup>st</sup> of each year, an annual report documenting activities relating to the Risk Management Measures undertaken during the previous calendar year. A copy of this report shall be maintained on file by the Owner and shall be made available for review by a Provincial Officer upon request. The report shall be signed by a Qualified Person and shall include, but not be limited to, the following minimum information requirements:

- i. A copy of all records relating to the inspection and maintenance program for the risk management barrier;
- ii. A copy of all records relating to the inspection and maintenance program for the Passive SVIMS;
- iii. Details of the work completed to sample and analyze the sub-slab vapour concentrations (and indoor air and ambient air concentrations, if completed), including all field and analytical data and laboratory certificates of analysis;
- iv. An assessment of the QA/QC protocols/procedures for the sampling programs completed and any implications they may have on sample results;
- v. A summary of all notifications to the Director of exceedances as required under Item 4.2.7. viii.(c) and any follow up actions taken to address the exceedances;
- vi. A copy of all records relating to the soil and ground water management plan;
- vii. A copy of all records relating to the health and safety plan;
- viii. An evaluation and interpretation of the results of the monitoring programs;
- ix. Any recommendations on changes to the monitoring programs and risk management measures; and
- x. An updated financial assurance cost estimate in accordance with Item 4.12 of the CPU, if applicable.

1.3 Refrain from using the Property for any of the following use(s): “agricultural or other use” and “residential use” as defined in O. Reg. 153/04.

1.4 Refrain from constructing the following building(s): No new building construction unless

construction is in accordance with Items 4.2.3 and 4.2.7.

- 1.5 Pursuant to the requirements of subsection 168.6(4) of the Act, the Owner shall ensure that every occupant of the Property is given notice that the Ministry has issued this CPU and that it contains the provisions noted above in Items 4.3 and 4.4. For the purposes of this requirement, an occupant means any person with whom the Owner has a contractual relationship regarding the occupancy of all or part of the Property.

#### 1.6 SITE CHANGES

In the event of a change in the physical site conditions or receptor characteristics at the Property that may affect the Risk Management Measures and/or any underlying basis for the Risk Management Measures, forthwith notify the Director of such changes and the steps taken to implement, maintain and operate any further Risk Management Measures as are necessary to prevent, eliminate or ameliorate any Adverse Effect that will result from the presence on, in or under the Property or the discharge of any Contaminant of Concern into the natural environment from the Property. An amendment to the CPU will be issued to address the changes set out in the notice received and any further changes that the Director considers necessary in the circumstances.

#### 1.7 REPORTS

Retain a copy of any reports required under the CPU for a period of seven (7) years from the date the report is created and within ten (10) days of the Director or a Provincial Officer making a request for a report, provide a copy to the Director or Provincial Officer.

#### 1.8 PROPERTY REQUIREMENT

For the reasons set out in the CPU and pursuant to the authority vested in me under subsection 197(1) of the Act, I hereby order you and any other person with an interest in the Property, before dealing with the Property in any way, to give a copy of the CPU, including any amendments thereto, to every person who will acquire an interest in the Property as a result of the dealing.

#### 1.9 CERTIFICATE OF REQUIREMENT

Within fifteen (15) days from the date of receipt of a certificate of requirement issued under subsection 197(2) of the Act, completed as outlined in Schedule "D", register the certificate of requirement on title to the Property in the appropriate land registry office.

#### 1.10 VERIFICATION

Immediately after registration of the certificate of requirement, provide to the Director written verification that the certificate of requirement has been registered on title to the Property.

#### 1.11 OWNER CHANGE

While the CPU is in effect, the Owner shall forthwith report in writing, to the Director, any changes of ownership of the Property.

## 1.12 FINANCIAL ASSURANCE

- 1.12.1 Financial assurance is not required as long as the Owner of the Property is the City of Thunder Bay.
- 1.12.2 If the Owner of the Property is not the City of Thunder Bay, then financial assurance shall be provided to the Director within fifteen (15) days from the date of transfer of the Property in the amount to be calculated prior to change of ownership and agreed upon by the Director and in a form satisfactory to the Director and in accordance with Part XII of the Act.
- 1.12.3 If the Owner of the Property is not the City of Thunder Bay, a written report reviewing the financial assurance required by the CPU shall be included in the annual report referred to in Item 4.2.12 of the CPU with an updated cost estimate with respect to the matters dealt with in Item 4.12.2 of the CPU.
- 1.12.4 The financial assurance required may be reduced from time to time or released by the Director upon application and submission of such supporting documentation as required by the Director.

## Part 5: General

- 1.1 The requirements of the CPU are severable. If any requirement of the CPU or the application of any requirement to any circumstance is held invalid, the application of such requirement to other circumstances and the remainder of the CPU shall not be affected thereby.
- 1.2 An application under sub section 168.6(3) of the Act to,
  - (a) alter any terms and conditions in the CPU or impose new terms and conditions; or
  - (b) revoke the CPU;shall be made in writing to the Director, with reasons for the request.
- 1.3 The Director may alter the CPU under subsections 132(2) or (3) of the Act to change a requirement as to financial assurance, including that the financial assurance may be increased or reduced or released in stages. The total financial assurance required may be reduced from time to time or released by an order issued by the Director under section 134 of the Act upon request and submission of such supporting documentation as required by the Director.

- 1.4 Subsection 186(3) of the Act provides that non-compliance with the requirements of the CPU constitutes an offence.
- 1.5 The requirements of the CPU are minimum requirements only and do not relieve the Owner from,
- (a) complying with any other applicable order, statute, regulation, municipal, provincial or federal law; or
  - (b) obtaining any approvals or consents not specified in the CPU.
- 1.6 Notwithstanding the issuance of the CPU, further requirements may be imposed in accordance with legislation as circumstances require. The Director shall also alter the CPU where the approval or acceptance of the Director is required in respect of a matter under the CPU and the Director either does not grant the approval or acceptance or does not grant it in a manner agreed to by the Owner.
- 1.7 In the event that any person is, in the opinion of the Director, rendered unable to comply with any requirements in the CPU because of,
- (a) natural phenomena of an inevitable or irresistible nature, or insurrections,
  - (b) strikes, lockouts or other labour disturbances,
  - (c) inability to obtain materials or equipment for reasons beyond your control, or
  - (d) any other cause whether similar to or different from the foregoing beyond your control,
- the requirements shall be adjusted in a manner defined by the Director. To obtain such an adjustment, the Director must be notified immediately of any of the above occurrences, providing details that demonstrate that no practical alternatives are feasible in order to meet the requirements in question.
- 1.8 Failure to comply with a requirement of the CPU by the date specified does not absolve the Owner from compliance with the requirement. The obligation to complete the requirement shall continue each day thereafter.
- 1.9 The Risk Management Measures identified in the Risk Assessment and also in Part 4 of the CPU and all the other requirements in the CPU shall commence upon the issuance of the CPU and continue in full force and effect in accordance with the terms and conditions of the CPU until such time as the Director alters or revokes the CPU.
- 1.10 The provisions of the CPU shall take precedence in the event of a conflict between the provisions of the CPU and the Risk Assessment.

## Part 6: Hearing before the Environmental Review Tribunal

- 1.1 Pursuant to section 139 of the Act, you may require a hearing before the Environmental Review Tribunal (the “Tribunal”), if within fifteen (15) days after service on you of a copy of the CPU, you serve written notice upon the Director and the Tribunal.
- 1.2 Pursuant to section 142 of the Act, the notice requiring the hearing must include a statement of the portions of the CPU and the grounds on which you intend to rely at the hearing. Except by leave of the Tribunal, you are not entitled to appeal a portion of the CPU, or to rely on a ground, that is not stated in the notice requiring the hearing.
- 1.3 Service of a notice requiring a hearing must be carried out in a manner set out in section 182 of the Act and Ontario Regulation 227/07: *Service of Documents*, made under the Act as they may be amended from time to time. The address, email address and fax numbers of the Director and the Tribunal are:

The Secretary  
Environmental Review Tribunal  
655 Bay Street, Suite 1500  
Toronto, ON, M5G 1E5  
Fax: (416) 326-5370 or 1-844-213-3474  
Email: [ERTTribunalSecretary@ontario.ca](mailto:ERTTribunalSecretary@ontario.ca)

and

Trina Rawn  
Ministry of the Environment, Conservation and Parks  
808 Robertson Street  
Kenora, Ontario  
P9N 1X9  
Fax: 807-468-2735  
Email: [trina.rawn@ontario.ca](mailto:trina.rawn@ontario.ca)

- 1.4 Unless stayed by application to the Tribunal under section 143 of the Act, the CPU is effective from the date of issue.
- 1.5 If you commence an appeal before the Tribunal, under section 47 of the Environmental Bill of Rights, 1993 (the “EBR”), you must give notice to the public in the EBR registry. The notice must include a brief description of the CPU (sufficient to identify it) and a brief description of the grounds of appeal.

The notice must be delivered to the Ministry who will place it on the EBR registry. The

notice must be delivered to the Ministry at 605-1075 Bay Street, Toronto, Ontario M5S 2B1 by the earlier of:

- 1.5.1 two (2) days after the day on which the appeal before the Tribunal was commenced; and
  - 1.5.2 fifteen (15) days after service on you of a copy of the CPU.
- 1.6 Pursuant to subsection 47(7) of the EBR, the Tribunal may permit any person to participate in the appeal, as a party or otherwise, in order to provide fair and adequate representation of the private and public interests, including governmental interests, involved in the appeal.
- 1.7 For your information, under section 38 of the EBR, any person resident in Ontario with an interest in the CPU may seek leave to appeal the CPU. Under section 40 of the EBR, the application for leave to appeal must be made to the Tribunal by the earlier of:
- 1.7.1 fifteen (15) days after the day on which notice of the issuance of the CPU is given in the EBR registry; and
  - 1.7.2 if you appeal, fifteen (15) days after the day on which your notice of appeal is given in the EBR registry.

Issued at Kenora this DATE day of DATE, 2020.

**DRAFT**

Trina Rawn  
Director, section 168.6 of the Act

## **Schedule “A”**

Table 6-1: Recommended Property Specific Standards in Soil

Table 6-2: Recommended Property Specific Standards in Groundwater

Table 6-1: Recommended Property Specific Standards in Soil

Contaminant of Concern (COC)	Maximum Soil Concentration	MECP Table 9 SCS <sup>(1)</sup>	Recommended Property Specific Standard <sup>(2)</sup>	Exposure Pathways with Unacceptable Risk <sup>(3)</sup>	Risk Management Required?	Potential for Off-Site Exceedance of SCS?
<b>BTEX</b>						
Benzene	0.239	0.02	0.29	Indoor Air Inhalation (Vis)	Yes	No
Toluene	2.07	0.05	2.48	None	No	No
Ethylbenzene	0.256	0.02	0.31	None	No	No
Xylenes	2.1	0.05	2.52	None	No	No
<b>PHCs</b>						
PHC F2	490	10	588	Indoor Air Inhalation (IW); Direct Contact (P&SO)	Yes	No
PHC F3	1,890	240	2,268	Direct Contact (P&SO)	Yes	No
PHC F4	7,270	120	8,724	Direct Contact (P&SO)	Yes	No
<b>VOCs</b>						
Acetone	3.5	0.5	4.2	None	No	No
Bromodichloromethane	<0.15	0.05	0.18	None	No	No
Hexane	0.345	0.05	0.41	None	No	No
Methyl ethyl ketone	0.52	0.5	0.62	None	No	No
<b>PAHs</b>						
Acenaphthene	2.6	0.072	3.1	None	No	No
Acenaphthylene	3.8	0.093	4.6	Indoor Air Inhalation (Vis)	Yes	No
Anthracene	9	0.022	11	Direct Contact (P&SO)	Yes	No
Benzo(a)anthracene	33.3	0.36	40	Direct Contact (Vis, Park, OW, SW, P&SO)	Yes	No
Benzo(a)pyrene	30.9	0.3	37	Direct Contact (Vis, Park, OW, SW, P&SO)	Yes	No
Benzo(b)fluoranthene	32.3	0.47	39	Direct Contact (Vis, Park, OW)	Yes	No
Benzo(g,h,i)perylene	15.9	0.68	19	Direct Contact (Vis, Park, OW, P&SO)	Yes	No
Benzo(k)fluoranthene	14.7	0.48	18	Direct Contact (Vis, Park, OW, P&SO)	Yes	No
Chrysene	35.3	2.8	42	Direct Contact (Vis, Park, OW, P&SO)	Yes	No
Dibenzo(a,h)anthracene	4.2	0.1	5.0	Direct Contact (Vis, Park, OW, SW)	Yes	No
Fluoranthene	71.8	0.69	86	Direct Contact (Vis, Park, OW, P&SO, M&B)	Yes	No
Fluorene	3.7	0.19	4.4	None	No	No
Indeno(1,2,3-cd)pyrene	17	0.23	20.4	Direct Contact (Vis, Park, OW, P&SO)	Yes	No
1&2-Methylnaphthalene	4.89	0.59	5.9	None	No	No
Naphthalene	1.79	0.09	2.1	Indoor Air Inhalation (Vis); Direct Contact (P&SO)	Yes	No
Phenanthrene	34.3	0.69	41	Direct Contact (Vis, Park, OW, SW, P&SO)	Yes	No
Pyrene	66.1	1	79	None	No	No
<b>Metals &amp; Inorganics</b>						
Antimony	14.6	1.3	17.5	None	No	No
Arsenic	36.2	18	43.4	Direct Contact (Vis, Park, OW, P&SO)	Yes	No
Barium	676	220	811	Direct Contact (P&SO, M&B)	Yes	No
Beryllium	5	2.5	6	Direct Contact (P&SO)	Yes	No
Boron	47	36	56.4	None	No	No
Boron (Hot Water Soluble)	23.6	1.5	28.3	Direct Contact (P&SO)	Yes	No
Cadmium	3.57	1.2	4.28	Direct Contact (Park, M&B)	Yes	No
Chromium (VI)	93.4	0.66	112	Direct Contact (SW, P&SO)	Yes	No
Cobalt	23	22	27.6	None	No	No
Copper	614	92	737	Direct Contact (P&SO)	Yes	No
Lead	1,150	120	1,380	Direct Contact (Vis, Park, OW, SW, P&SO, M&B)	Yes	No
Mercury	2.5	0.27	3	Indoor Air Inhalation (Vis)	Yes	No
Molybdenum	6.5	2	7.8	Direct Contact (M&B)	Yes	No
Selenium	4.8	1.5	5.8	Direct Contact (M&B)	Yes	No
Silver	1.3	0.5	1.56	None	No	No
Vanadium	269	86	323	Direct Contact (Park, OW, SW, P&SO, M&B)	Yes	No
Zinc	987	290	1,184	Direct Contact (P&SO, M&B)	Yes	No
Electrical Conductivity	1.4	.7	1.7	Direct Contact (P&SO)	Yes	No

(1) MECP (2011a) Table 9 – Full Depth Generic SCS for Use within 30m of a water body in a non-potable groundwater condition for all property uses

(2) PSS = Maximum COC concentration (or reported detection limit) plus 20% uncertainty factor, unless otherwise noted.

(3) Vis = property visitor, Park = parkland user, IW = Indoor worker, OW = outdoor worker, SW = subsurface worker, P&SO = plants and soil organisms, M&B = mammals and birds

All concentrations in units of µg/g.



Table 6-2: Recommended Property Specific Standards in Groundwater

Contaminant of Concern (COC)	Maximum Groundwater Concentration	MECP Table 9 SCS <sup>(1)</sup>	Recommended Property Specific Standard <sup>(2)</sup>	Exposure Pathways with Unacceptable Risk <sup>(3)</sup>	Risk Management Required?	Potential for Off-Site Exceedance of SCS?
<b>PHCs</b>						
PHC F2	570	150	684	Indoor Air Inhalation (Vis, IW)	Yes	No
<b>PAHs</b>						
Acenaphthylene	3.18	1.4	3.82	Direct Contact (SW, P&SO)	Yes <sup>(4)</sup>	No
Anthracene	1.36	1	1.63	Direct Contact	No	No

Notes:

- (1) MECP (2011a) Table 9 – Full Depth Generic SCS for Use within 30m of a water body in a non-potable groundwater condition for all property uses
- (2) PSS = Maximum COC concentration (or reported detection limit) plus 20% uncertainty factor, unless otherwise noted.
- (3) Vis = property visitor, Park = parkland user, IW = Indoor worker, OW = outdoor worker, SW = subsurface worker, P&SO = plants and soil organisms, M&B = mammals and birds
- (4) Although no risk management is required for acenaphthylene alone the subsurface worker, RMM is required based on other carcinogenic PAH's

All concentrations in units of µg/L.

## Schedule “B”

### FIGURES

- Figure 1: “Plan of Survey” by JD Barnes, dated March 19, 2018
- Figure 2: “Site Plan and APECs” by EXP, dated February 2019
- Figure O.1: “Risk Assessment Measures – Soil Cover System” by EXP, dated February 2019
- Figure O.2: “Conceptual Soil Direct Contact Engineering RMM Details” by EXP, dated February 2019
- Figure O.3: “Vapour Mitigation System” by EXP, dated August 8, 2019
- Figure O.4: “Vapour Mitigation System” by EXP, dated August 8, 2019
- Figure G.7: “Landscaping Restriction Area” by EXP, dated February 2019



Figure 2: "Site Plan and APECs" by EXP, dated February 2019

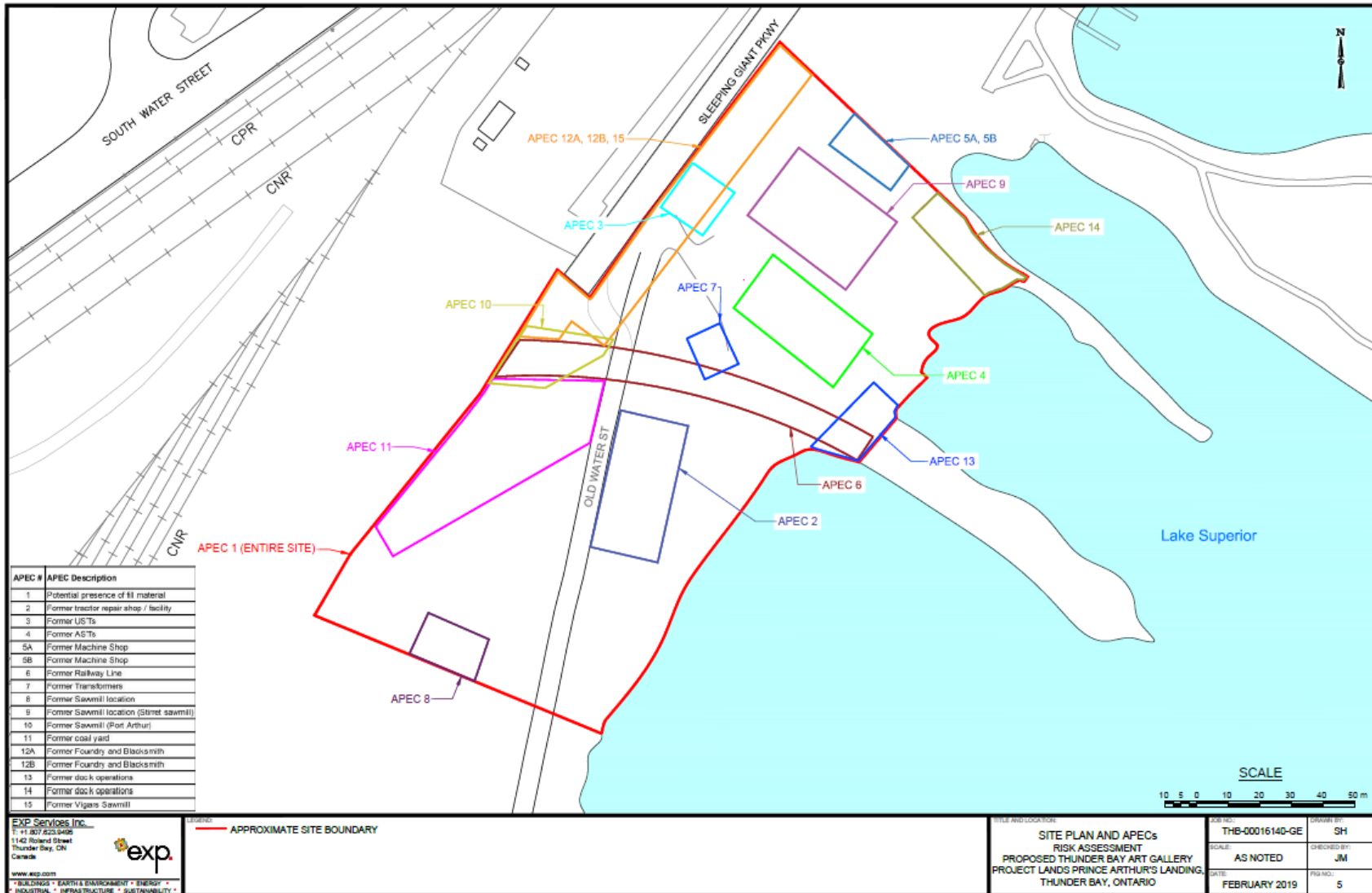


Figure O.1: "Risk Assessment Measures – Soil Cover System" by EXP, dated February 2019



Figure O.2: "Conceptual Soil Direct Contact Engineering RMM Details" by EXP, dated February 2019

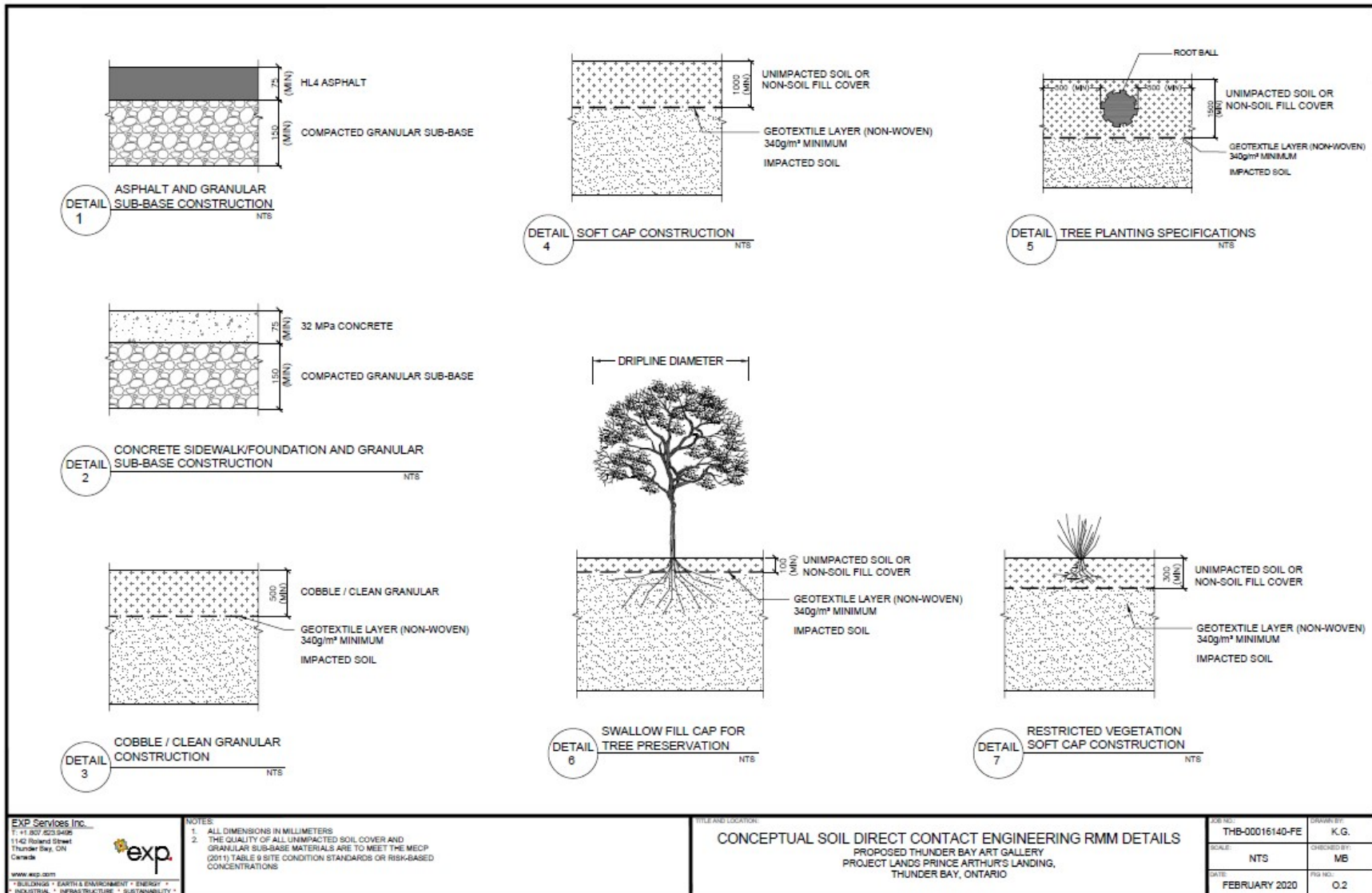




Figure O.3: "Vapour Mitigation System" by EXP, dated August 8, 2019

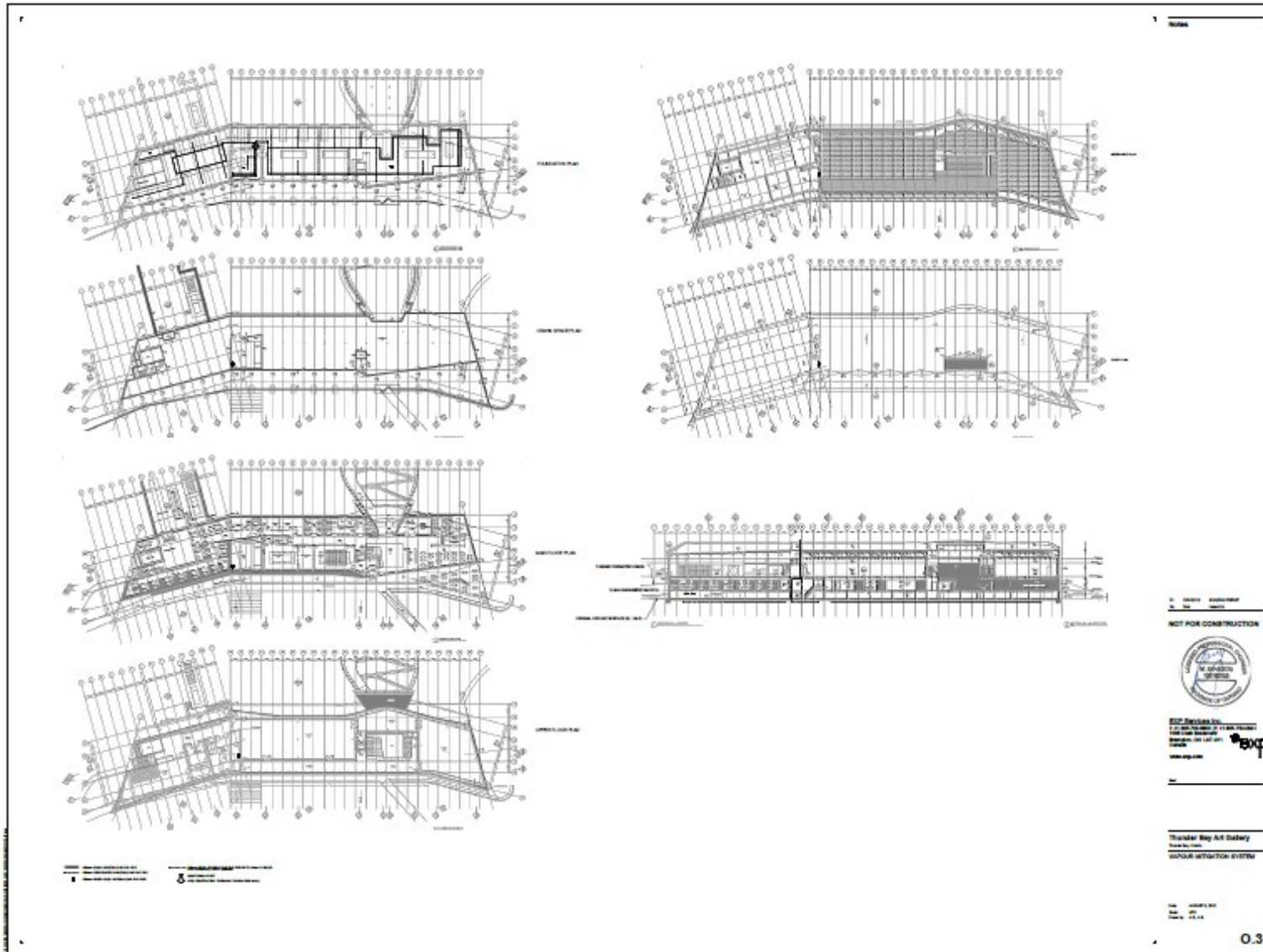
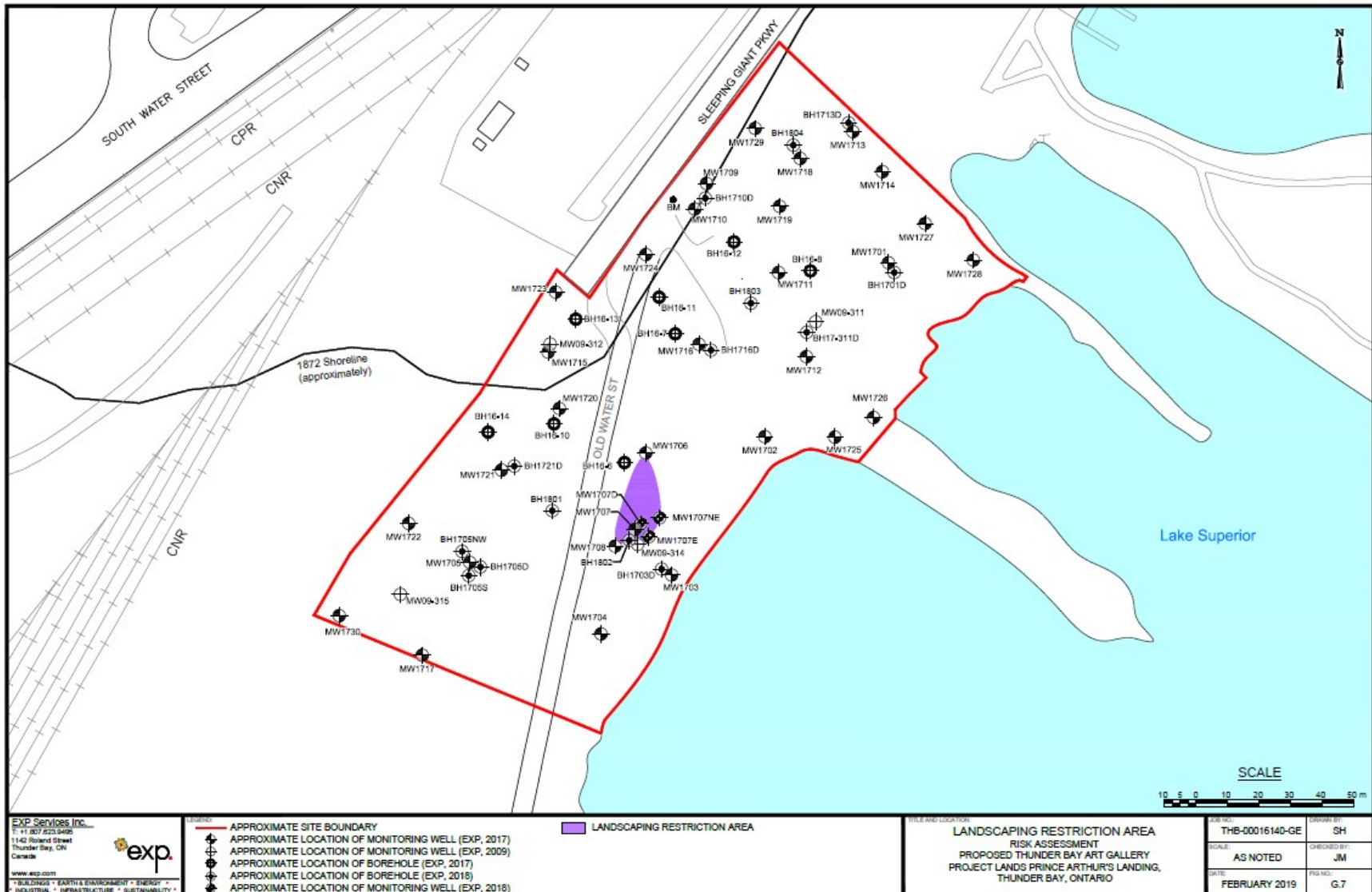






Figure G.7: "Landscaping Restriction Area" by EXP, dated February 2019



## Schedule "C"

Table 7-5: Sub-Slab Vapour Criteria

Target Analysis	Health Based Indoor Air Criterion (HBIAC) ( $\mu\text{g}/\text{m}^3$ ) <sup>(1)</sup>	Sub Slab Vapour Criterion (SSVC) ( $\mu\text{g}/\text{m}^3$ ) <sup>(2)</sup>
Benzene	0.506	126
PHC F2	471	117,500
Bromodichloromethane	0.0556	13.9
1&2-Methylnaphthalene	0.772	193
Naphthalene	0.772	193
Acenaphthene	1.01	252
Acenaphthylene	0.101	25.2
Benzo(a)anthracene	0.0101	2.52
Pyrene	1.01	252
Mercury	0.00626	1.56

(1) MECP (2016a) Health-Based Indoor Air Criterion (HBIAC) for a residential property

(2) Sub-Slab Vapour Criteria (SSVC) estimated as  $\text{SSVC} = \text{HBIAC} / 0.004$  where 0.004 is the empirical attenuation factor for a commercial building (MECP, 2016a)

**Schedule "D"**

**CERTIFICATE OF REQUIREMENT**

**s.197(2)**

**Environmental Protection Act**

This is to certify pursuant to Item 4.9 of the Certificate of Property Use number **4086-BMMJFU** issued by Trina Rawn, Director of the Ministry of the Environment, Conservation and Parks, under sections 168.6 and 197 of the Environmental Protection Act on **DATE**, 2020 being a Certificate of Property Use and order under subsection 197(1) of the Environmental Protection Act relating to the property municipally known as the Proposed Thunder Bay Art Gallery Lease Lands in Thunder Bay, Ontario, being part of Property Identification Numbers 62264-0535 (LT) and 62499-0070 (LT) (the "property") with respect to a Risk Assessment and certain Risk Management Measures and other preventative measure requirements on the Property,

**The Corporation of the City of Thunder Bay**

and any other persons having an interest in the property, are required before dealing with the Property in any way, to give a copy of the Certificate of Property Use, including any amendments thereto, to every person who will acquire an interest in the Property.

Under subsection 197(3) of the Environmental Protection Act, the requirement applies to each person who, subsequent to the registration of this certificate, acquires an interest in the Property.