

**ENVIRONMENTAL PROTECTION AND ENHANCEMENT ACT**

**BEING CHAPTER E-12 R.S.A. 2000 (the "Act")**

Amendment No.1

to

ENVIRONMENTAL PROTECTION ORDER NO. EPO – EPEA – 40679

I, Elise Chamberland, Compliance Manager, Southern Region, designated Director for the purpose of section 243(1) of the Act, DO HEREBY AMEND Environmental Protection Order No. EPO-EPEA-40679 ("Order") by:

- 1) deleting the words crossed out below from the Order; and
- 2) adding the underlined words below to the Order.

DATED at the City of Calgary in the Province of Alberta this 19 day of December, 2023.



Elise Chamberland  
Compliance Manager (the Director)  
Regulatory Assurance Division - South

**Notwithstanding the above requirements, the Parties shall obtain all necessary approvals in complying with this order.**

**Take notice that this environmental protection order is a remedial tool only, and in no way precludes any enforcement proceedings being taken regarding this matter under this Act or any other legislation.**

12-10 Capital Corporation ("12-10")  
400, 630-8 Avenue S.W.  
Calgary, AB T2P 1G6

and

Riaz Mamdani  
400, 630-8 Avenue S.W.  
Calgary, AB T2P 1G6

and

Strategic Group Capital Corporation ("Strategic Group")  
400, 630-8 Avenue S.W.  
Calgary, AB T2P 1G6

[Collectively hereinafter referred to as the "Parties"]

#### **The Parties, the Lands and Historical Industrial Use**

**WHEREAS** Riaz Mamdani is the sole director for 12-10 and Strategic Group;

**WHEREAS** 12-10 is the registered owner of the lands legally described as Plan 1423LK, Block 47 and Plan 1423LK, Block 46, in the City of Calgary located in the province of Alberta (collectively the "Lands") since 2009;

**WHEREAS** the municipal addresses have changed over time and link to the legal land descriptions as follows:

- 1248 and 1238 - 10 Avenue SW are the same property legally described as Plan 1423LK, Block 47;
- 1240 and 1230 - 10 Avenue SW are the same property legally described as Plan 1423LK, Block 47; and
- 1216 and 1210 - 10 Avenue SW are the same property, legally described as Plan 1423LK, Block 46;

**WHEREAS** the previous land uses prior to 2009 on the Lands included chemical, smelting, railway operations, dry cleaning facilities, and diesel and fertilizer storage;

#### **Historical Environmental Reports and Report of Release of Tetrachloroethylene at the Lands**

**WHEREAS** in a Golder Associates Ltd. report titled "*Phase II Environmental Site Assessment 1210, 1230, & 1238-10<sup>th</sup> Avenue SW, Calgary, AB*" dated June 2006 (the "Golder June 2006 Report"), tetrachloroethylene (the "Substance") was reported at a concentration above the then applicable guidelines of that time (*2005 Canadian Environmental Quality Guidelines*) for soil and groundwater;

**WHEREAS** on October 20, 2006, Troy Environmental Consulting in a report titled "*Phase II Environmental Site Assessment of 1210 to 1238 -10 Avenue SW., Calgary, AB*" mapped the concentration of the

Substance, which “reveals pooling of the PCE materials (the “Substance”) at two main areas” of non-aqueous phase liquid (“DNAPL”) pools at 1238 - 10 Avenue and 1210 -10 Avenue SW;

**WHEREAS** in two Troy Environmental Consulting reports titled *“Recovery Well Program and Groundwater treatability Assessment at 1210-1238 - 10 Avenue SW., Calgary, Alberta”* dated March 5, 2007, and *“Off-site Delineation Site Investigation of 1216 and 1248 - 10 Avenue S.W., Calgary, AB”* dated June 8, 2007, first identified exceedances of the Substance at 1300 - 10<sup>th</sup> Avenue SW and on the eastern edge of the Lands towards 1140 -10 Avenue SW, the properties to the west and east (the “Off-Site”) in both soil and groundwater;

**WHEREAS** between June 2006 and April 17, 2018, numerous delineation and sampling events have been undertaken since the Golder June 2006 Report;

**WHEREAS** on April 17, 2018, Troy Environmental Consulting reported the historical release of the Substance to Environment and Protected Areas (EPA) through the Environment and Dangerous Goods Hotline;

#### **Need for a Soil Vapour Extraction System and Indoor Air Sampling**

**WHEREAS** the environmental consultant for the Parties, Millennium EMS Solutions Ltd. titled *“Calculation of Soil Vapour Guidelines and Indoor Air Sampling 1216-1248 - 10<sup>th</sup> Avenue SW Calgary, Alberta”* dated May 2018 (“MEMS May 2018 Report”), to summarize indoor air quality sampling conducted in the buildings on the Lands and 1300 -10<sup>th</sup> Avenue SW;

**WHEREAS** on June 14, 2018, EPA required a soil vapour intrusion mitigation strategy be immediately implemented at 1300 -10<sup>th</sup> Avenue and 1232 - 10<sup>th</sup> Avenue SW, due to exceedances of the Tolerable Concentration noted in Table C-7 of the *Alberta Tier 1 Soil and Groundwater Remediation Guidelines, February 2016*, (“2016 Tier 1”) of the Substance reported in the MEMS May 2018 Report. Additionally, indoor air samples at 1216 - 10<sup>th</sup> Avenue were required for the implementation of the soil vapour intrusion mitigation strategy at this location by August 31, 2018;

**WHEREAS** EPA didn’t receive the soil vapour intrusion mitigation strategy, and indoor air sampling required by August 31, 2018 until November 7, 2018, from Equilibrium Environmental Inc. (“Equilibrium”);

**WHEREAS** on November 14, 2018, EPA received a report titled *“Supplementary Phase 2 Scope for Lateral Delineation of Tetrachloroethylene (TCE) Impacts near Addresses 1216 and 1230 - 10<sup>th</sup> Avenue SW, Calgary Alberta”* (the “Equilibrium 2018 Report”) and the proposed scope of work in the Equilibrium 2018 Report to achieve lateral closure and delineation of the Substance near the Lands was approved by EPA on November 27, 2018;

**WHEREAS** between December 2018 and January 2019, EPA requested on several occasions that the Parties provide the exposure control plan, as the latest indoor air sampling concentrations exceeded 2016 Tier 1 threshold for inhalation concentrations at 1216 and 1230 -10<sup>th</sup> Avenue SW as reported in the Equilibrium report titled *“Indoor Air Sampling for Tetrachloroethylene (PERC) and Other Solvents, near Addresses 1216 and 1230 -10<sup>th</sup> Avenue SW, Calgary, AB”* dated December 6, 2018;

**WHEREAS** on January 10, 2019, Equilibrium submitted the soil vapour intrusion mitigation strategy titled "*Exposure Control Plan for Mitigating Indoor Air Inhalation Exposures of Tetrachloroethylene (PERC) and Other Chlorinated Solvents, near Addresses 1216 and 1230 - 10<sup>th</sup> Avenue SW, Calgary, AB*", outlining the soil vapour intrusion mitigation system (the "System") including two banks of three subsoil extraction wells and the capture equipment;

**WHEREAS** on January 25, 2019, Equilibrium advised EPA that extraction wells had been installed on the Lands, the lateral delineation program would be completed following the receipt of adjacent landowner permissions, and the System would start the following week;

**WHEREAS** on June 18, 2019, EPA requested the drilling logs of the extraction wells installed on the Lands, a report on the operation of the System including the first quarterly indoor air sampling results for 1300, 1216 and 1230 -10<sup>th</sup> Avenue SW locations, immediately to follow up on the commitment made by Equilibrium on February 8, 2019, to submit a report to EPA by March 25, 2019;

**WHEREAS** on June 24, 2019, Equilibrium submitted a report titled "*Indoor Air Sampling and Remediation Design/Performance for Tetrachloroethylene (PERC) Impacts near Addresses 1216 and 1230 10<sup>th</sup> Avenue SW, Calgary, AB*", which after review from EPA on August 16 and 26, 2019, additional locations required indoor air sampling;

**WHEREAS** on June 24, 2019, Equilibrium submitted a report titled "*Supplemental Phase 2 ESA for Delineation of Tetrachloroethylene (PERC) Impacts near Addresses 1216 and 1230 10<sup>th</sup> Avenue SW, Calgary, AB*", identifying an exceedance of the Substance in soil and groundwater north of the Lands located in the Staples parking lot at 1215-1301- 9 Avenue SW;

**WHEREAS** the Offsite, has been expanded to include the north adjacent properties (the "Expanded Offsite");

**WHEREAS** Appendix 1 identifies the municipal address and legal land descriptions for the Lands and Expanded Offsite;

**WHEREAS** Equilibrium submitted the supplementary Phase II to EPA on October 2, 2019, titled "*Updated Supplemental Phase 2 ESA for Lateral Delineation of Tetrachloroethylene (PERC) near Addresses 1216 and 1230 10<sup>th</sup> Avenue SW, Calgary, AB AEP File No.: SCD01528*" dated September 29, 2019 (the "Equilibrium Supplemental Phase 2");

**WHEREAS** EPA conducted a review of the indoor air sampling report from Equilibrium titled "*Indoor Air Sampling and Exposure Control for Tetrachloroethylene (PERC) Impacts near Addresses 1216 and 1230 10<sup>th</sup> Avenue SW, Calgary AB*", dated September 30, 2019. On October 16, 2019, EPA requested immediate expansion of the System due to increasing concentrations of the Substance at 1300 -10<sup>th</sup> Avenue SW, east of the Lands;

#### **Need to Complete the Vertical and Lateral Delineation of Soil and Groundwater Impacts, Risk Management Plan**

**WHEREAS** on October 25, 2019, after reviewing the Equilibrium Supplemental Phase 2, EPA requested additional information including:

- Further investigation to delineate the vertical extent of the groundwater exceedance of the Substance;
- Further investigation to delineate the lateral impacts of soil and groundwater exceedances of the Substance;
- Investigation of the presence, extent, and mobility of DNAPL;
- Updating the Equilibrium Supplemental Phase 2 report to meet the requirements of the *Alberta Environmental Site Assessment Standard (2016)*; and
- Development of a risk management plan (RMP);

**WHEREAS** on October 31, 2019, Equilibrium submitted a memo to EPA indicating an additional four wells would be added to the System closer to 1300 -10<sup>th</sup> Avenue;

**WHEREAS** on November 19, 2019, Equilibrium advised EPA that the updated Equilibrium Supplemental Phase 2 would be submitted shortly;

**WHEREAS** on December 5, 2019, Equilibrium submitted a memo to EPA notifying that the four wells on 1248 -10<sup>th</sup> Avenue SW were added to the System (the "Expanded System");

**WHEREAS** on February 11, 2020, and February 2, 2021, the Expanded System was found to be unplugged as noted in the Equilibrium report titled "*Indoor Air Sampling and Exposure Control for Tetrachloroethylene (PERC) Impacts near Addresses 1216 to 1248 10<sup>th</sup> Avenue SW, Calgary, AB*", dated July 26, 2021. As a result, the parking lot 1248 -10<sup>th</sup> Avenue SW within the Lands where the Expanded System is located was fenced and closed for evenings and overnight after the February 2, 2021, Equilibrium inspection;

#### **Delayed Reporting by the Parties and Data Gaps to Determine Risks to Human Health and the Environment**

**WHEREAS** between January 2020 and June 2023, EPA requested on several occasions the updated Equilibrium Supplemental Phase 2, RMP, and quarterly indoor air sampling reports for the Lands, 1216, 1240, and 1300 - 10<sup>th</sup> Avenue SW;

**WHEREAS** on July 12, 2023, Equilibrium submitted a report titled "*Indoor Air Sampling and Exposure Control for Tetrachloroethylene (PERC) Impacts near Addresses 1216 to 1248 10<sup>th</sup> Avenue SW, Calgary, AB*", dated July 5, 2023, which identified exceedances of the Tolerable Concentration noted in Table C-7 of the *Alberta Tier 1 Soil and Groundwater Remediation Guidelines, January 2023* ("Alberta Tier 1 2023") of the Substance at 1240 - 10 Avenue SW;

**WHEREAS** there are data gaps in the information regarding exceedances of the Substance in groundwater and soil on both the Lands and Expanded Off-Site which require additional work including:

- Complete lateral and vertical delineation of the soil and groundwater exceedances of the Substance onsite and Off-Site;
- Complete delineation of elevated soil vapour concentrations;
- Assessment of the level of risk to human and ecological receptors;
- Quarterly indoor air sampling at all locations previously sampled;

**WHEREAS** 12-10, Mr. Mamdani and Strategic Group are each a “person responsible” for the Substance, as defined in section 1(tt) of the *Act*;

**WHEREAS** Elise Chamberland, Compliance Manager, Regulatory Assurance Division South, (the “Director”) has been appointed a Director for the purpose of issuing environmental protection orders under the *Act*;

**WHEREAS** the Director is of the opinion that a release of a Substance has occurred, and that the Substance has caused, is causing or may cause an adverse effect as defined in the *Act*, including known adverse effects to human health and on the environment;

**WHEREAS** the Director is in the opinion that the remedial actions taken to date by the Parties are not sufficient and further work is required to delineate and manage the Substance;

**THEREFORE**, I, Elise Chamberland, Director, pursuant to sections 113 of the *Act*, DO HEREBY ORDER THAT:

1. The Parties shall continue to operate the Expanded System, which is located at 1240 and 1248 10<sup>th</sup> Avenue SW, to mitigate vapour intrusion into buildings at 1300, 1216 and 1240 - 10<sup>th</sup> Avenue SW, Calgary, AB.
2. The Parties shall monitor the operation of the Expanded System the first of each month, always keep the system in good working order, and shall immediately report any failure of the system (including loss of power supply) to operate to the Director.
3. The Parties shall develop a new soil vapour intrusion mitigation strategy to reduce indoor air concentrations in the affected buildings. This plan shall include:
  - a. Performance assessment of the Expanded System including any repairs or updates required to maintain its operation so that indoor air sampling results are always below Alberta Tier 1 2023, and an implementation schedule;
  - b. A monthly schedule for maintenance and inspections;
  - c. Every third Monday in March, June, September and December monitoring and testing of indoor air samples at 1300, 1240, 1216 - 10<sup>th</sup> Avenue SW; and
  - d. A contingency plan if the soil vapour extraction system or strategy is found to be ineffective (indoor air sampling results are above Alberta Tier 1 2023);
4. The Parties shall submit the new soil vapour extraction mitigation strategy for approval to the Director by ~~September 31~~ September 30, 2023.
5. The Parties shall submit any supplemental information requested by the Director within 7 days of the Director’s request.
6. The Parties shall implement the new soil vapour extraction mitigation strategy no later than 90 days after receiving approval from the Director.

7. The Parties shall continue with quarterly (every third Monday in March, June, September, and December) indoor air sampling program at 1216, 1240, and 1300 - 10<sup>th</sup> Avenue SW:
  - a. Work areas and occupied spaces to be identified prior to indoor air sampling;
  - b. Indoor air samples shall be collected from all identified occupied spaces and work areas on each floor of each building;
  - c. Indoor air samples shall be collected using SUMMA canisters equipped with 8-hour flow controllers;
  - d. Indoor air samples shall be submitted to an accredited laboratory for analysis of perchloroethylene (PCE);
  - e. Results of indoor sampling shall be reported to the Director one month after each sampling event and reporting shall continue until such time as the Director directs otherwise;
  - f. The Expanded System shall be inspected monthly to ensure proper operation of the system;
  - g. Sampling events shall occur every third Monday in March, June, September, December; and
  - h. If exceedances of the Substance are identified, an investigation into the cause shall be conducted. Based on the findings, the Parties shall prepare a plan setting out corrective actions and submit the plan to the Director for approval no later than 30 days from the identification of the exceedance.
8. By ~~December 31, 2023~~ August 31, 2024, the Parties shall complete lateral and vertical delineation of the exceedances of the Substance in groundwater and soil, on the Lands and the Expanded Off-Site, and any other property where Exceedances of the Substances are found as the delineation is conducted:
  - a. Delineation must include soil, groundwater, and soil vapour;
9. The Parties shall submit reports that must meet the requirements set out in the *Alberta Environmental Site Assessment Standard*;
  - a. Reports must be submitted for review by no later than ~~January 30, 2024~~, October 18, 2024, and approved by the Director;
  - b. A duly completed and signed off Record of Site Condition must be submitted to the Director on ~~January 30, 2024~~, October 18, 2024;
  - c. If DNAPL is encountered, the presence extent and mobility must be investigated and reported within 60 days from when it was encountered.
10. The Parties shall by ~~February 28, 2024~~, October 18, 2024, submit a RMP to the Director for approval outlining a plan to manage the risk of the Substances on the Lands or any Substances

from the Lands that have migrated to the Expanded Off-Site, or other properties, that meets all the requirements in the *Alberta Risk Management Plan Guide (2017)*:

- a. The RMP must be submitted for review and any deficiencies identified by EPA must be addressed no later than two weeks from the date on which notification is provided by the Director;
  - b. The RMP must be approved by the Director; and
  - c. The RMP shall be prepared by a qualified environmental professional who meets the requirements for professional sign off criteria as established by Alberta's *Competencies for Remediation and Reclamation Advisory Committee Recommendations Report*, dated February 2006.
11. The Parties shall implement the RMP as written in the implementation schedule in the RMP that has been approved by the Director.
12. The Parties shall submit status reports on the implementation of the RMP every third Monday of March, June, September, and December to the Director. The submission of status reports shall continue until such time as the Director directs otherwise.

DATED at the City of Calgary in the Province of Alberta, this 1 day of August, 2023.

\_\_\_\_\_ [Original signed and dated August 1, 2023]

Elise Chamberland  
Compliance Manager (the Director)  
Regulatory Assurance Division - South

**Section 91 of the *Environmental Protection and Enhancement Act* may provide a right of appeal against this decision to the Alberta Environmental Appeals Board. There may be a strict time limit for filing such an appeal. A copy of section 91 is enclosed. For further information, please contact the Board Secretary at #306 Peace Hills Trust Tower, 10071 109 Street, Edmonton, Alberta, T5J 3S8; telephone (780) 427-6207; fax (780) 427-4693.**

**Notwithstanding the above requirements, the Parties shall obtain all necessary approvals in complying with this order.**

**Take notice that this environmental protection order is a remedial tool only, and in no way precludes any enforcement proceedings being taken regarding this matter under this Act or any other legislation.**



Appendix 1

