

ENVIRONMENTAL PROTECTION AND ENHANCEMENT ACT

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

ENFORCEMENT ORDER NO. EO-EPEA-295303

590140 Alberta Limited
Suite 300, 2912 Memorial Dr SE
Calgary, Alberta, T2A 6R1

[Collectively hereinafter referred to as the "Party"]

WHEREAS 590140 Alberta Limited was issued on May 11, 2012, Approval No. 295303-00-00 [the "Approval"] for the construction, operation and reclamation of the EMCOR Business Park wastewater treatment system [the "Wastewater System"] on land legally described as the SW ¼ of Section 32, Township 23, Range 28, West of the 4th meridian in Rocky View County, in the Province of Alberta [the "Lands"];

WHEREAS Marco Simonelli and Carlo Simonelli are the Directors of 590140 Alberta Limited;

WHEREAS the Approval expired on May 1, 2022;

WHEREAS on August 21, 2022 Barry Bohn of Watertech Engineering Research and Health Inc., the consultant working for the Party, reported to the Alberta Environment and Parks (AEP) Environment and Dangerous Goods Emergencies call centre that the Wastewater System was operating with an expired Approval;

WHEREAS the Act Section 60 and 61 states;

Prohibition

60 No person shall knowingly commence or continue any activity that is designated by the regulations as requiring an approval or registration or that is redesignated under section 66.1 as requiring an approval unless that person holds the required approval or registration.

61 No person shall commence or continue any activity that is designated by the regulations as requiring an approval or registration or that is redesignated under section 66.1 as requiring

an approval unless that person holds the required approval or registration.

WHEREAS on September 7, 2022 the AEP inspector contacted Marco Simonelli by phone to inform him of the expired Approval and the Wastewater System be immediately shutdown;

WHEREAS on September 7, 2022 a letter was sent from AEP to the registered office of Beaumont Church LLP, at Suite 300-2912 Memorial Drive SE, Calgary, Alberta requiring the immediate shutdown of the Wastewater System and to haul the wastewater to a facility authorized to receive it;

WHEREAS Elise Chamberland, District Compliance Manager, Southern Region [the "Director"] has been appointed a Director under the *Act* for the purposes of issuing Enforcement Orders;

WHEREAS the Director is of the opinion that the Party contravened section 60 and/or 61 of the *Act* by continuing to operate the Wastewater System without an Approval;

WHEREAS the Director is of the further opinion that the Party contravened the *Act*, as described above, which is an offence under section 227(j) of the *Act*;

THEREFORE, I, Elise Chamberland, District Compliance Manager, Southern Region, pursuant to section 210 of the *Act*, DO HEREBY ORDER:

1. 590140 Alberta Limited submit a complete application for an approval for the construction, operation and reclamation of the Wastewater System for the EMCOR Business Park in Rocky View County, Alberta, Canada on or before December 31, 2022.
2. Monitoring, Operation and Reporting
 - a. For the purposes of this Order, all of the definitions contained in Approval No. 295303-00-00 apply to this Order, whether the Approval has expired or not.
 - b. The Party shall
 - i. immediately; and
 - ii. continue to until further written notice from the Director

comply with each of the terms and conditions of this Order.
3. The Party shall immediately report by telephone any contravention of the terms and conditions of this Order to the Director at 1-780-422-4505.
4. In addition to reporting pursuant to Clause 3 of this Order the Party shall submit, within 7 days from any contravention of the terms and conditions of this Order, a written report to the Director.

5. The Party shall record and retain all the following information in respect of any sampling conducted or analyses performed for a minimum of three years:
 - a. the place, date and time of sampling;
 - b. the dates the analyses were performed;
 - c. the analytical techniques, methods or procedures used in the analyses;
 - d. the names of the persons who collected and analyzed each sample; and
 - e. the results of the analyses.
6. Collection, preservation, storage, handling and analysis of samples, and reporting shall be conducted in accordance with the following unless otherwise specified in writing by the Director:
 - a. the *Standard Methods for the Examination of Water and Wastewater* published jointly by the American Public Health Association, American Water Works Association, and the Water Environment Federation, as amended.
7. The Party shall have all samples that are required to be obtained by this Order analyzed:
 - a. in a laboratory accredited for those specific parameters analysed pursuant to ISO/IEC 17025 standard, as amended, for the specific parameter(s) to be analysed;
 - b. by the certified operator; or
 - c. as otherwise specified in writing by the Director.
8. The term sample as used in Clause 7 of this Order does not include samples directed to continuous monitoring equipment, until specifically required in writing by the Director.
9. The Party shall comply with the terms and conditions of any written authorization issued by the Director under Clause 7 of this Order.
10. The Party shall notify the Director upon commencement of the operation of the Wastewater Irrigation System.
11. The Party shall submit a Soil Monitoring Plan to the Director, on or before November 30, 2012, unless otherwise authorized in writing by the Director.
12. The Party shall submit a Groundwater Monitoring Plan to the Director, on or before November 30, 2012, and in accordance with Clause 10 of this Order, or as otherwise authorized in writing by the Director.

13. The Party shall review and update the *Operations Program*, as follows:
- a. when charges to the program occur; and
 - b. periodically throughout the term of this Order.
14. The Party shall not release any substances from the wastewater system to the surrounding watershed except as authorized under this Order.
15. The Party shall operate a wastewater system which shall include:
- a. the wastewater collection system and the transmission line(s) to the EMCOR Business Park wastewater treatment plant;
 - b. a membrane bioreactor wastewater treatment plant, including all of the following:
 - i. fine screening,
 - ii. volume equalization,
 - iii. anoxic tankage,
 - iv. aeration tankage,
 - v. biological odour control,
 - vi. submerged membrane filtration unit(s),
 - vii. disinfection by UV radiation, and
 - viii. treated effluent storage.
 - c. a treated wastewater discharge to an irrigation system located on the EMCOR Business Park development.
16. The wastewater treatment facility in this Order is classified as Class II in accordance with the *Water and Wastewater Operators' Certification Guidelines*.
17. At all times the operation of the wastewater treatment plant shall be performed by, or under the direction of a person who holds a valid wastewater treatment certificate of qualification at a minimum of Level II.
18. The Party shall only dispose of sludge:
- a. to an approved facility:
 - i. registered or approved under the Act, and
 - ii. able to accept this sludge; or

b. as authorized in writing by the Director.

19. All treated effluent shall meet the Treated Wastewater Effluent Limits in TABLE 1-1 and Wastewater Irrigation limits in TABLE 1-2.

20. The Party shall only dispose of treated wastewater by irrigation in accordance with:

- a. *Guidelines for Municipal Wastewater Irrigation*, Alberta Environment, 2000, as amended;
- b. the conditions of this Order; or
- c. as otherwise authorized in writing by the Director.

21. The Party shall not dispose of treated wastewater by irrigation unless all of the following conditions are satisfied:

- a. the treated wastewater is taken from the EMCOR Business Park treated wastewater storage cell(s);
- b. 15 meters of land separates all treated wastewater irrigated land from adjacent property not owned by the Party, unless permission is received from the adjacent owner(s) to lessen this distance;
- c. 30 meters of land separates all treated wastewater irrigated land and any of the following:
 - i. public roads,
 - ii. railway lines, and
 - iii. water wells;
- d. a minimum buffer zone of 30 meters of land separates all treated wastewater irrigated lands and any surface water body including, but not limited to:
 - i. dugouts,
 - ii. irrigation canals, and
 - iii. water reservoirs;
- e. the land irrigated with treated wastewater shall be used to grow only the following during the period in which the land is being irrigated with treated wastewater:
 - i. forages,
 - ii. coarse grains,

- iii. oilseed crops,
 - iv. grass, or
 - v. sod;
- f. owners of land adjacent to the land being irrigated with treated wastewater have received written notification from the Party prior to the start of each irrigation season that treated wastewater is being used to irrigate the development;
- g. signs have been posted around the land being irrigated notifying the public that treated wastewater is being used to irrigate the development; and
- h. irrigation standpipes and outlets on the development have been marked to indicate that they are part of a treated wastewater irrigation system and not part of the potable water system.
22. The Party shall only irrigate land with treated wastewater between 2200 hours and 0800 hours, unless the irrigation water is applied by hand watering.
23. The Party shall not irrigate land with treated wastewater at a rate that:
- a. exceeds the capacity of the soil to absorb moisture; or
 - b. results in runoff from the irrigation lands.
24. The Party shall not irrigate land with treated wastewater if any of the following conditions exist:
- a. the wind speed exceeds 30 kilometres per hour (measured at a representative spot on the development / golf course);
 - b. the soil is frozen;
 - c. the ground is snow covered
- unless otherwise authorized in writing by the Director.
25. The Party shall not cause any one of the following to occur as a result of irrigating land with treated wastewater:
- a. exceedance of the crop seasonal water deficit and leaching requirements for the land being irrigated;
 - b. exceedance of the seasonal crop nutrient requirements for the land being irrigated;
 - c. accumulation of "plant - available nitrogen" in the soil in excess of one growing season's crop nutrient requirements;

- d. accumulation of "plant - available phosphorous" in the soil in excess of one growing season's crop nutrient requirements;
 - e. leaching of nitrates that results in an adverse affect to groundwater quality;
 - f. leaching of nitrates that results in an adverse affect to surface water quality; or
 - g. adverse impact to any soil property, including but not limited to, soil sodicity as determined by the Sodium Adsorption Ratio (SAR).
26. The Party shall prevent any and all direct or potential cross-connection of the treated wastewater irrigation system with any potable waterworks system.
27. Treated wastewater from the EMCOR Business Park wastewater treatment plant shall be discharged as follows:
- a. to on-site treated effluent storage; and then
 - b. by irrigation to the specified land for wastewater irrigation located in the SW ¼ 32-23-28-W4M; or
 - c. as otherwise authorized in writing by the Director.
28. The Party shall ensure the treated wastewater discharge from the wastewater treatment plant complies with the limits specified in TABLE 1-1.
29. The Party shall ensure the treated wastewater used for wastewater irrigation complies with the limits specified in TABLE 1-2.

**TABLE 1-1: LIMITS FOR TREATED WASTEWATER
(discharged from wastewater treatment plant)**

Parameter	Limit
CBOD	≤ 25.0 mg/L monthly arithmetic mean of daily samples
TSS	≤ 25.0 mg/L monthly arithmetic mean of daily samples
Total Coliform Counts	≤ 1000 per 100 mL/monthly geometric mean
Faecal Coliform Counts	≤ 200 per 100 mL/monthly geometric mean

**TABLE 1-2: LIMITS FOR TREATED WASTEWATER
(used for wastewater irrigation)**

Parameter	Limit
Total Coliform Counts	≤ 1000 per 100 mL/ weekly geometric mean in calendar month
Faecal Coliform Counts	≤ 200 per 100 mL/ weekly geometric mean in calendar month
CBOD	≤ 100.0 mg/L
COD	≤ 150.0 mg/L
TSS	≤ 100.0 mg/L
EC	≤ 1.0 dS/m for unrestricted use > 1.0 and ≤ 2.5 dS/m for restricted use > 2.5 dS/m unacceptable
SAR	≤ 4 for unrestricted use > 4 and ≤ 9 for restricted use when EC > 1.0 dS/m > 9 unacceptable
pH	≥ 6.5 and ≤ 8.5

30. The Party shall monitor the wastewater system as required in TABLE 2-1.

TABLE 2-1: MONITORING – EMCOR BUSINESS PARK WASTEWATER SYSTEM

Parameter	Frequency (Minimum)	Sample Type	Sampling Location
UNTREATED WASTEWATER			
BOD ₅	Once per day	Composite	Untreated wastewater entering the wastewater treatment plant
TSS			
Volume of flow		Metered	
TREATED WASTEWATER (Mechanical Treatment Plant)			
CBOD	Once per day	Composite	Treated wastewater after disinfection
TSS			
Total Volume	Total discharged	Estimated	Treated wastewater being discharged to treated effluent storage
TREATED WASTEWATER (Wastewater Irrigation)			
CBOD	Once immediately prior to beginning irrigation at the start of the season and then once per month during irrigation season	Grab	Treated Wastewater being used for irrigation
TSS			
EC (Electrical Conductivity) Calcium, Magnesium, Sodium, Potassium, SAR (Sodium Absorption ration), pH	Once immediately prior to beginning irrigation at the start of the season and then once in the middle of the irrigation season		
Total coliform counts	Once per week		
Faecal coliform counts			
Rate of application of treated effluent	Total Volume applied to entire site	Calculated	Treated Wastewater being used for irrigation
Rate of application of treated effluent	Once per week or once per irrigation event during irrigation season		

Parameter	Frequency (Minimum)	Sample Type	Sampling Location
Weekly Volume	Weekly volume used during the irrigation season		
Total Volume	Total volume used during the irrigation season		
Public acceptance problems	During the Irrigation Program	N/A	Any public acceptance problems in respect of the treated wastewater irrigation program
UNAUTHORIZED RELEASES			
Release Volume	Total Volume	Estimated	Wastewater bypassing the wastewater treatment plant, accidental spills or overflows
			Wastewater bypassing the lift station(s), accidental spills or overflows
			Wastewater bypasses, accidental spills or overflows from the wastewater collection system
BOD ₅	During the unauthorized discharge	Grab	At the release point
TSS			
Phosphorus			
Ammonia-Nitrogen			
The amount of any substance other than wastewater or storm water that is spilled or discharged accidentally or intentionally into or from the stormwater collection system	Event Specific	Estimated Volume or Mass	At the release point
SLUDGE DISPOSAL			
Sludge Volume	Total Volume	Estimated	Amount of sludge being disposed of or hauled

31. The Party shall compile and retain monthly reports at the wastewater treatment plant.

32. The monthly report in Clause 31 of this Order shall include, at a minimum:

- a. the name, telephone and fax numbers of all certified operators;
- b. the analytical results for all parameters required to be monitored in accordance with this Order during the month;
- c. the locations of all sampling performed during the month in accordance with this Order;
- d. the name and manufacturer of all treatment chemicals added during the month;
- e. the results of all required monitoring and measurements conducted during the month in accordance with this Order; and
- f. a description of any problems experienced, and corrective actions taken at the wastewater system during the month.

33. In addition to any other reporting required under the Act, the regulations and this Order, the Party shall compile and retain at the wastewater treatment plant an annual report, by February 28 of the year following the calendar year in which the information on which the report is based was collected.

34. The annual report in Clause 33 in this Order shall contain, at a minimum, all of the following information:

- a. a summary of the monthly reports, specifying the monthly minimum, average, and maximum results for each parameter monitored, for each month (as applicable);
- b. a summary of the number, sampling dates and analytical results of the bacteriological samples analyzed for each month;
- c. the results of any other compliance monitoring done during the year pursuant to this Order, that was not included in any monthly report;
- d. a summary of any operational problems related to the wastewater irrigation program;
- e. one copy of the Annual Wastewater Irrigation Report;
- f. a description of any problems experienced, and corrective actions taken at the EMCOR Business Park wastewater treatment plant during the year;
- g. a calculation of the uncommitted hydraulic reserve capacity for the wastewater treatment plant; and

h. a summary of changes made and / or proposed to the Operations Program.

35. The Party shall complete a Wastewater Irrigation Report during the first season of wastewater irrigation, which shall include, at a minimum, all of the following:

- a. any and all soil monitoring data, interpretations and recommendations;
- b. any and all groundwater monitoring data, interpretations and recommendations;
- c. the name, address, and phone number of the individual or company that is responsible for performing the wastewater irrigation;
- d. a description of the wastewater irrigation equipment used, including the size, type, and the rated water flow of irrigation sprinklers and nozzles;
- e. a comprehensive description of the wastewater irrigation program, including operational procedures, agreements and operating practices that are in place for treated wastewater disposal by irrigation;
- f. a water balance for all irrigated portions of the development that receives wastewater effluent from the wastewater treatment plant;
- g. a nutrient balance for all irrigated portions of the development that receives wastewater effluent from the wastewater treatment plant;
- h. the optimum application rate of treated wastewater from the wastewater treatment plant for wastewater irrigation based on;
 - i. nutrient accumulation,
 - ii. crop nutrient use,
 - iii. nutrient balance,
 - iv. soil moisture,
 - v. water balance, and
 - vi. no migration of nutrients into the groundwater;
- i. a timeline of the implementation of any changes and recommendations made by a *Professional Agrologist* regarding the optimum application rate of treated wastewater in (h);
- j. a plan illustrating the layout and orientation of the wastewater irrigation system including;
 - i. any additional land area that could be used for wastewater irrigation

during wet seasons when above average mean seasonal precipitation occurs,

- ii. the overall layout of the wastewater irrigated lands in the EMCOR Business Park with:
 - A. an overlay of the wastewater irrigation system including the EMCOR Business Park wastewater treatment plant and treated effluent storage, with the locations of individual sprinkler heads,
 - B. the area of coverage for individual sprinkler heads on the entire wastewater irrigated area,
 - C. location of any and all man-made berms or dykes,
 - D. location of any and all actual and/or proposed soil monitoring locations,
 - E. location of any and all actual and/or proposed groundwater monitoring locations,
 - F. all non-irrigable areas located on the EMCOR Business Park development to which wastewater cannot be applied in accordance with the *Procedures manual for the Classification of Land for Irrigation in Alberta, Alberta Agriculture, (2004)* as amended,
 - G. the location of any structures, roads, property lines, watercourses, seasonal watercourses, water bodies, and railway lines directly adjacent to, as well as within, the area used for wastewater irrigation, and
 - H. an illustration of the wastewater irrigation setbacks as they relate to any structures, roads, property lines, watercourses, seasonal watercourses, water bodies, and railway lines.

36. Prior to submitting the Wastewater Irrigation Report to the Director, the Party shall have a *Professional Agrologist*:

- a. review;
- b. provide comments; and
- c. sign and stamp the Wastewater Irrigation Report.

37. The Party shall submit the Wastewater Irrigation Report to the Director on or before February 28 of the year following the calendar year in which the information on which the report is based was collected.

38. After the first year of operation, and for each and every subsequent year after that, the Party shall compile an Annual Wastewater Irrigation Report which shall include, at a minimum, all of the following:
- a. an annually updated and revised version of the Wastewater Irrigation Report by the Party, required in Clause 35 of this Order;
 - b. a review of any changes, recommendations and observations regarding the Soil Monitoring Plan by a *Professional Agrologist* who is familiar with the requirements of the Soil Monitoring Plan in Clause 11 of this Order;
 - c. a review of any changes, recommendations and observations regarding the Groundwater Monitoring Plan by a *Professional Agrologist* who is familiar with the requirements of the Groundwater Monitoring Plan in Clause 12 of this Order;
 - d. a timeline of the implementation of any changes and recommendations made by a professional Agrologist regarding the Groundwater Monitoring Plan in Clause 12 of this Order;
 - e. a timeline of the implementation of any changes and recommendations made by a professional Agrologist regarding the Soil Monitoring Plan in Clause 11 of this Order; and
 - f. a summary of all monitoring documentation, including supporting wastewater, groundwater, and soil data, and recommendations (from a qualified *Professional Agrologist*) relating to the revised optimum wastewater irrigation limits and rates (hourly, daily and annually) related to the land being irrigated by treated wastewater.
39. If the Party monitors for any substances or parameters which are the subject of operational limits as set out in this Order more frequently than is required and using procedures authorized in this Order, then the Party shall provide the results of such monitoring as an addendum to the Annual Wastewater report required by this Order.

DATED at the City of Calgary in the Province of Alberta, this 27 day of September, 2022.



Elise Chamberland
District Compliance Manager
Southern Region

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, 10011 – 109 Street, Edmonton, Alberta, T5J 3S8; telephone (780) 427-6207; fax (780) 427-4693.

Notwithstanding the above requirements, the Party shall obtain all necessary approvals in complying with this Order.

Take notice that this Enforcement 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.

