

**Licence No.: 1411 RR**

**Licence Issued: October 3, 1990**

**Licence Revised: July 11, 1995**

**Licence Revised: January 8, 2003**

**IN ACCORDANCE WITH THE MANITOBA ENVIRONMENT ACT (C.C.S.M. c. E125)  
THIS LICENCE IS ISSUED PURSUANT TO SECTIONS 10(1) AND 14(2)**

**Nexen Inc. and Nexen Chemicals Canada Limited Partnership; the Licencees**

**Stage 2 Licence**

The following limits, terms, and conditions shall be complied with by Nexen Inc. (the owner) and Nexen Chemicals Canada Limited Partnership (the operator) being a partnership of Nexen Inc. and Nexen Chemicals Canada Limited, in connection with the operation of a sodium chlorate chemical production plant located on the NE 1/4 of Section 10, Township 10, Range 18 WPM in the City of Brandon:

**LIQUID DISCHARGES**

1. The Licencees shall not discharge or direct the drainage of any wastewater streams, other than sanitary/domestic wastewater, to the existing septic tank and field system for treatment and disposal.
2. The Licencees shall not discharge or direct the flow of any process wastewater onto the surface of the plant site property or off the plant site property.
3. The Licencees shall direct the final disposal of all excess reverse osmosis reject water from the reject water storage tank only into disposal well No. 3 (shown on Appendix 'A' attached to this Licence) unless otherwise approved in writing by the Director.
4. The Licencees shall ensure that the maximum pressure setting on the high pressure shutdown switch downstream of the injection pumps is always set at such a level that the pressure at the well head cannot and does not exceed 6,000 kilopascals at either of the 6.3 litres per second or 12.6 litres per second pumping rates.
5. The Licencees shall test the high pressure deep well injection line to at least 125% of the operating pressure before the injection activity commences, and shall provide the Director with the results of the test.
6. The Licencees shall ensure that the reverse osmosis reject water storage tank is located within a dyked impoundment, lined on the interior with an impervious liner satisfactory to the Director, and capable of containing, either independently or by way of integration with the plant's main sumps, a volume of fluid equal to or greater than the volume of the said storage tank, before the storage tank is placed into operation.
7. The Licencees shall, within 24 hours of its occurrence, report to the Director the details of any spill or leakage of liquid pollutants (other than those already required to be reported in accordance with Manitoba Regulation 439/87), having occurred on the surface property of the operation and potentially posing a threat to surface or groundwater quality, and shall undertake such mitigation measures as either approved by or otherwise specified by the Director.
8. The Licencees shall provide and maintain to the satisfaction of the Director:
  - a. an injection well flow meter which is capable of continuously and cumulatively measuring the quantity of saline wastewater being directed into disposal well No. 3 to within an accuracy of at least plus or minus 2 percent of the actual quantity; and
  - b. sampling taps to obtain representative water samples of the source well and the reverse osmosis reject water.

9. The Licencees shall calibrate the injection well flow meter at least annually, and tag the meter with a tag displaying date of calibration, the serial number of the meter and the meter factor.
10. The Licencees shall measure and keep a record of the monthly volume of wastewater injected into disposal well No. 3.
11. The Licencees shall sample the source water and the reverse osmosis reject water, and analyze and report upon the quality of these liquid streams, at such times, for such duration, and for such parameters as may be specified from time to time by the Director.
12. The Licencees shall submit the information collected pursuant to Clauses 10 and 11, in a form satisfactory to the Director, within 30 days following the month during which the samples and measurements were taken.
13. The Licencees shall notify the Director if and when:
  - a. any substance foreign to the source water is detected in, or proposed to be mixed with, the reverse osmosis reject water; or
  - b. the deep well injection rate is proposed to be increased to a rate in excess of 1,090 m<sup>3</sup>/day.

### **AIR EMISSIONS**

14. The Licencees shall not cause or permit the emission of particulate matter from any point of emission from the said operation to be in excess of 0.23 grams per dry standard cubic metre, calculated at 25 degrees Celsius and 760 millimetres of mercury, and corrected to 12 percent carbon dioxide for processes involving combustion.
15. The Licencees shall not cause or permit visible emissions from any point of emission from the operation that exhibit an opacity equal to or greater than:
  - a. 20 percent for a period or periods of more than 4 minutes in the aggregate in any one hour; or
  - b. 40 percent at any time.
16. The Licencees shall limit the emission of chlorine gas to such an extent that chlorine gas emissions from the said operation, as measured at any point of emission from the sodium chlorate manufacturing process, do not at any time exceed five parts per million by volume.
17. The Licencees shall, at the request of the Director, ensure that adequate stack sampling facilities are installed in a manner satisfactory to the Director, and shall ensure that the said facilities include proper sampling ports, safe sampling platforms, safe access to the said sampling platforms, access to electrical power to operate sampling equipment and such additional sampling facilities as are requested by the Director.
18. The Licencees shall, at the request of the Director:
  - a. conduct emission testing for the emissions referred to in Clause 14 and Clause 16 of this Licence, within 60 days of the Director's request, in a manner satisfactory to the Director; and
  - b. submit a report containing the emission testing data and all other related data to the Director within 90 days following completion of the emission testing.
19. The Licencees shall submit an annual report to the Director, by February 1st of each year, on the total plant emissions of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and Nitrogen oxides (NO<sub>x</sub> reported as NO<sub>2</sub>) in the preceding year, using estimation methodologies satisfactory to the Director.

### **SOLIDS / SLUDGE DISPOSAL**

20. The Licencees shall, in regards to the disposal of solid wastes and qualifying sludges (excepting regulated

hazardous solid or sludge wastes) generated by the chemical plant operation, dispose of such wastes into a waste disposal ground which is registered under Manitoba Regulation 98/88 R and has the consent of the operator of that waste disposal ground, unless these materials are otherwise stored or disposed of in a manner approved of by the Director.

21. The Licencees shall, respecting the existing decommissioned sludge lagoons located on the plant property and containing brine sludge and asbestos fibres:
  - a. carry out and provide the Director with a legal survey by July 1, 1991, of the boundaries of each lagoon relative to the legal boundaries of the plant's property; and
  - b. if and when requested in writing by the Director, develop and submit a plan, for the Director's approval, for the alternate disposal of all of the sludge in the said lagoons to a secure landfill site; and
  - c. carry out the plan approved under Clause 21(b) within such time as specified by the Director.

### GENERAL

22. The Licencees shall, at the request of the Director, from time to time, investigate specific areas of concern regarding any segment, component or aspect of pollutant containment, handling, treatment, or disposal/emission systems associated with the said operation, and provide the Director with such engineering reports, drawings, specifications, analyses of pollutants at designated locations, and such other information as may be requested in writing.
23. The Licencees shall at all times maintain a high standard of equipment maintenance and good housekeeping practices consistent with meeting the limits, terms and conditions prescribed in this Licence.
24. Environment Act Licence No. 1411 R is herewith rescinded.

"original signed by"

**Larry Strachan, P. Eng.**

**Director**

**Environment Act**

**File No.: 2768.3**

**APPENDIX 'A' (Site Plan)**

*(To view map more clearly please print this page.)*

