

**Licence No.: 2615**

**Licence Issued: August 22, 2003**

**IN ACCORDANCE WITH THE ENVIRONMENT ACT (C.C.S.M. c. E125)**

**THIS LICENCE IS ISSUED PURSUANT TO SECTIONS 10(1) AND 14(2) TO:**

**STANDARD AERO LIMITED; "the Licencee"**

for the operation of the Development being a manufacturing and industrial facility known as Plant 1 in Parcel D, Plan 29085 and Parcel F, Plan 29085 at or near 33 Allen Dyne Road in the City of Winnipeg in accordance with the Proposal filed July 12, 1993, the request for alteration received February 26, 1996, the request for alteration dated March 5, 1997, and the request for alteration with supporting documentation filed May 7, 2003, and subject to the following specifications, limits, terms and conditions:

**DEFINITIONS**

In this Licence,

**"accredited laboratory"** means an analytical facility accredited by the Standards Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Conservation to be equivalent to the SCC, or be able to demonstrate, upon request, that it has the quality assurance/quality control (QA/QC) procedures in place equivalent to accreditation based on the international standard ISO/IEC 17025, or otherwise approved by the Director;

**"affected area"** means a geographical area, excluding the property of the Development;

**"ampere-hour (Ah)"** means the integral of electrical current applied to a plating tank (amperes) over a period of time (hours);

**"approved"** means approved by the Director in writing;

**"boiler"** means any combustion equipment fired with fossil fuel, biomass or a by-product derived from fossil fuel, for the purpose of generating hot water or steam;

**"Carbon Monoxide"** means an inorganic compound comprised of one atom of carbon and one atom of oxygen expressed as CO, unless otherwise indicated, which has the designated CAS Number 630-08-0;

**"CAS Number"** means the Chemical Abstracts Service Registry Number (referred to as CAS RNs or CAS Numbers) which are unique identifiers that have been assigned by the Chemical Abstracts Service, a division of the American Chemical Society, for chemical substances;

**"chromic acid"** means a compound expressed as CrO<sub>3</sub>, unless otherwise indicated, which has the designated CAS Number 1333-82-0;

**"chromic acid anodizing"** means the electrolytic process by which a metal surface is converted to an oxide surface coating, for functional purposes, in a solution containing chromic acid;

**"chromium"** means an element expressed as Cr, unless otherwise indicated, which has the designated CAS Number 7440-47-3;

**"dangerous good"** means any product, substance or organism designated in the regulations, or conforming with the criteria set out in the regulations, or in any regulation adopted in accordance with The Dangerous Goods Handling and Transportation Act, and includes hazardous wastes;

**"Director"** means an employee so designated pursuant to The Environment Act;

**"Environment Officer"** means an employee so designated pursuant to The Environment Act;

**"hexavalent chromium"** means chromium in an oxidative state of +6 expressed as  $\text{Cr}^{+6}$  unless otherwise indicated, which has the designated CAS Number 18540-29-9;

**"hydrogen chloride"** means a compound expressed as HCl, unless otherwise indicated, which has the designated CAS Number 7647-01-0;

**"hydrogen cyanide"** means a compound expressed as HCN, unless otherwise indicated, which has the designated CAS Number 74-90-8;

**"noise nuisance"** means a continuous or repeated noise in an affected area, which is offensive, obnoxious, troublesome, annoying, unpleasant or disagreeable to a person:

- a. residing in an affected area;
- b. working in an affected area; or
- c. present at a location in an affected area which is normally open to the members of the public; and

if the noise

- d. is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director, and within a 90 day period, from 5 different persons falling within clauses a), b), or c), who do not live in the same household;

**"Nitrogen Oxides"** means the sum of nitric oxide expressed as NO, unless otherwise indicated, which has the designated CAS Number 10102-43-9 and nitrogen dioxide expressed as  $\text{NO}_2$ , unless otherwise indicated, which has the designated CAS Number 10102-44-0, and expressed collectively as a nitrogen dioxide equivalent  $\text{NO}_x$ ;

**"odour nuisance"** means a continuous or repeated odour, smell or aroma, in an affected area, which is offensive, obnoxious, troublesome, annoying, unpleasant, or disagreeable to a person:

- a. residing in an affected area;
- b. working in an affected area; or
- c. present at a location in an affected area which is normally open to the members of the public; and

if the odour, smell or aroma

- d. is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director, and within a 90 day period, from 5 different persons falling within clauses a), b), or c), who do not live in the same household;

**"opacity"** means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background;

**"particulate matter"** means any finely divided liquid or solid matter other than water droplets;

**"particulate residue"** means that part or portion of an atmospheric emission which is deposited onto a surface;

**"Plant 1"** means the facility involved with the general machining and mechanical operations in support of the overhaul of gas turbine engines and includes such activities as Human Resources, Health & Safety Administration, engineering support, chromic acid anodizing, and performance testing of engines and engine accessories;

**"point source"** means any point of emission from the Development where pollutants are emitted to the atmosphere by means of a stack;

"**QA/QC**" means quality assurance/quality control;

"**sanitary wastes**" means sewage containing human body, toilet, liquid, waterborne culinary, sink or laundry waste;

"**sewerage system**" means all sewers, appurtenances, pumping stations, treatment works, and all physical properties of the system, but does not include extensions to the collection systems;

"**significant**" means of important negative consequence as determined by an individual with demonstrated expertise who is qualified to make such judgements;

"**stack**" means a duct, pipe, chimney, vent, or similar opening through which pollutants are emitted to the atmosphere;

"**Standard Methods for the Examination of Water and Wastewater**" means the most recent edition of Standard Methods for the Examination of Water and Wastewater published jointly by the American Public Health Association, the American Waterworks Association and the Water Environment Federation;

"**sulphuric acid mist**" means finely dispersed liquid droplets which contain sulphuric acid, a compound expressed as  $H_2SO_4$ , unless otherwise indicated, which has the designated CAS Number 7664-93-9;

"**surface tension**" means the molecular force, measured in dynes per cm, that exists, in a tank where chrome electroplating occurs, at the surface of chromic acid solution or at the point where the chromic acid solution and air meet;

"**total chromium**" means the sum of chromic acid, hexavalent chromium and all other compounds containing chromium; and

"**waste water**" means any water contaminated by pollutants during the electroplating processes at the Development, or as otherwise determined by the Director.

## **GENERAL TERMS AND CONDITIONS**

### **FOR ALL FACILITIES IN THE DEVELOPMENT**

This Section of the Licence contains requirements applicable to all facilities in any area of the Development to provide guidance to the Licencee in implementing practices designed to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

1. The Licencee shall implement a high standard of equipment maintenance and good housekeeping and operational practices with respect to the Development, at all times.
2. The Licencee shall reduce the production and dissemination of wastes by initiating and maintaining waste reduction and waste recycling programs.
3. The Licencee shall, upon the request of the Director and in addition to any of the limits, terms or conditions specified in this Licence:
  - a. sample, monitor, analyze and/or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such pollutants or ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, for such duration and at such frequencies as may be specified;
  - b. determine the environmental impact associated with the release of any pollutants from the said Development; or
  - c. provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and analytical procedures being used,

bioassay data, flow rate measurements and such other information as may from time to time be requested.

4. The Licencee shall, unless otherwise specified in this Licence:
  - a. carry out all preservations and analyses on liquid samples in accordance with the methods prescribed in the most current edition of Standard Methods for the Examination of Water and Wastewater or in accordance with equivalent preservation and analytical methodologies approved by the Director;
  - b. carry out all sampling of, and preservation and analyses on, soil and air samples in accordance with methodologies approved by the Director;
  - c. ensure that all analytical determinations are undertaken by an accredited laboratory; and
  - d. report the results to the Director within 60 days of the samples being taken.
5. The Licencee shall carry out remedial measures, modifications, or alterations, as deemed necessary by the Director, in respect to matters authorized under this Licence.
6. The Licencee shall provide to the Director, upon request, all information required under this Licence, in writing and in such form and content (including number of copies), as may be specified by the Director.
7. The Licencee shall designate an Environmental Manager within 60 days of the issuance of this Licence, who shall have the responsibility to seek compliance with all the limits, terms and conditions in this Licence, and to assist the Senior Management of Standard Aero Limited in the management of environmental issues at the Development. The name of the Environmental Manager shall be submitted in writing to the Director within 14 days of appointment.

### **LIMITS, TERMS AND CONDITIONS**

#### **Respecting Air Emissions – Limits**

8. The Licencee shall not emit from the Development:
  - a. particulate matter in air emissions that:
    - i. exceeds 0.23 grams per dry standard cubic metre calculated at 25 degrees Celsius and 760 millimetres of mercury, corrected to 12 percent carbon dioxide for processes involving combustion, from any point source of the Development;
    - ii. exhibits a visible plume with an opacity of greater than 5 percent at any point beyond the property line of the Development; or
    - iii. results in the deposition of visible particulate residue at any time beyond the property line of the Development; or
  - b. particulate matter from any point source with an opacity that equals or exceeds:
    - i. 20 percent as the average of any 24 consecutive opacity observations taken at 15 second intervals;
    - ii. 20 percent for more than 16 individual opacity observations within any 1 hour period; or
    - iii. 40 percent for any individual opacity observation.
9. The Licencee shall not emit total chromium at any time from any point source(s) of the Development, in excess of 0.03 milligrams per dry standard cubic metre calculated at 25 degrees Celsius and 760 millimetres of mercury.
10. The Licencee, notwithstanding Clause 9, shall not emit any one or more of the following pollutants from any part or process of the Development such that the concentration of any pollutant, when measured by a method approved by the Director and at any point of reception beyond the property line of the Development, exceeds the following limits:

<b>Pollutant</b>	<b>Period of Measurement</b>	<b>Limit</b>
Chromium	Yearly average	0.001 µg/m <sup>3</sup>
Chromic Acid	One (1) hour average	4.5 mg/m <sup>3</sup>
Hydrogen chloride	Yearly average	7.0 µg/m <sup>3</sup>
Hydrogen chloride	One (1) hour average	3000.0 µg/m <sup>3</sup>
Hydrogen cyanide	Yearly average	3.0 µg/m <sup>3</sup>
Hydrogen cyanide	One (1) hour average	40.0 µg/m <sup>3</sup>
Sulphuric acid mist	One (1) hour average	100.0 µg/m <sup>3</sup>

11. The Licencee shall not cause or permit a noise nuisance to be created as a result of the construction, operation, or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate a noise nuisance.
12. The Licencee shall not cause or permit an odour nuisance to be created as a result of the construction, operation, or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate an odour nuisance.

#### **Respecting the Operation of Boilers and Heaters**

13. The Licencee, shall operate new or upgraded boilers or heaters, in compliance with the appropriate emission limits for nitrogen oxides and carbon monoxide contained in the most recent edition of the Canadian Council of Ministers of the Environment publication entitled "*National Emission Guideline For Commercial/Industrial Boilers And Heaters – Initiative N306*".

#### **Respecting Control of Point Source and Fugitive Emissions**

14. The Licencee shall control, capture and direct any airborne pollutants created by activity at the Development and containing particulate matter or total chromium to an air pollution control device(s) which provides sufficient treatment such that the particulate matter or total chromium are not emitted from the Development in exceedance of limits contained in this Licence.

#### **Respecting Air Pollution Control Devices**

15. The Licencee shall submit for the Director's approval, within 90 days of the issuance of this Licence, a standard operating procedural manual and a maintenance schedule for each air pollution control device based on the manufacturer's specifications and recommendations.
16. The Licencee shall not engage in those activities at the Development restricted by Clause 14 of this Licence unless:
  - a. the operating and maintenance measures and status of the device are in full compliance with the approved procedures and timetables;
  - b. all discharges of treated emissions from the air pollution control devices are immediately directed to a stack; and
  - c. the emissions do not contain concentrations of pollutants which:
    - i. are in violation of any other applicable legal instrument including an Act, Regulation or

- by-law; or
  - ii. otherwise create a significant health or environmental impact beyond the boundaries of the Development.
17. The Licencee shall maintain a log book of the most recent 24 month period to record any maintenance or breakdown of any air pollution control device. The log book shall be kept at the Development and shall be available upon request for inspection by an Environment Officer. The log book shall record, at minimum, the following information:
- a. identification of the air pollution control device and the process(s) it serves;
  - b. time/date of log entry; and
  - c. nature of maintenance/event.
18. The Licencee shall handle, store and dispose of all liquids, sludges and solid wastes collected by the air pollution control equipment in a manner suitable to their characterization as type of waste or dangerous good.

### **Respecting the Anodizing Facility**

19. The Licencee shall operate the chromic acid anodizing process such that all tank(s) containing chromic acid and having an electrical current applied to them have a non-resettable totalling device, apparatus or other means, acceptable to the Director, which records, to the nearest hour, the accumulated time during which current is applied.
20. The Licencee shall operate the chromic acid anodizing process such that within any period of 12 consecutive months, the surface area, measured in square metres, of all tank(s) containing chromic acid and having an electrical current applied to them multiplied by the number of hours of application of electric current to these tanks, does not exceed an integer value of 2496, where the integer value is calculated by:
- $$\{\text{surface area (m}^2)\} \text{ multiplied by } \{\text{hours of applied current}\}$$
21. The Licencee shall operate the chromic acid anodizing process such that emissions to the air from tank(s) which contain chromic acid and to which an electrical current is applied are controlled and collected by an emissions collection system, and are subsequently, but prior to discharge from the facility, directed to, and treated by, an appropriate pollution control device having a rated removal efficiency of 99.9% for total chromium.

### **Respecting Air Emissions – Sampling, Analysis, Reporting**

22. The Licencee, upon written request from the Director, shall provide a stack or stacks at any area of the Development including all necessary sampling facilities for the sampling of air emissions at the Development. The stack or stacks shall be provided:
- a. at a location(s) and within a time frame satisfactory to the Director; and
  - b. to the specifications and in accordance with the most recent version of Manitoba Conservation Guideline, *Guideline for Stack Sampling Facilities*, unless otherwise approved by the Director.
23. The Licencee, upon a written request from the Director, shall submit a detailed plan for any area of the Development which is acceptable to and approved by the Director, for the sampling and analysis of potential air pollutants, released as stationary point and fugitive emissions, including any compounds determined by the Director. The plan shall identify the rationale for the sampling, the ways and means by which the sampling program will be implemented including any special measures or methods which would be necessitated by influencing factors such as unfavourable weather conditions, the need for large or additional sample volumes, the need for multiple sampling runs, the methods used for the sampling and the analysis for each compound, the detection level to be attained, a comprehensive QA/QC program, and other items as may be identified by the Director.

24. The Licencee shall perform all stack sampling in accordance with the most recent version of Manitoba Conservation Report No. 96-07, *Interim Stack Sampling Performance Protocol*, unless otherwise approved by the Director.
25. The Licencee shall arrange the scheduling of the sampling program, referred to in Clause 23 of this Licence, such that a representative of Manitoba Conservation is available to monitor and audit the implementation of the sampling program.
26. The Licencee, within a timeframe to be determined by the Director, shall complete the sampling of emissions according to the approved plan submitted pursuant to Clause 23 of this Licence.
27. The Licencee, within 60 days of the receipt of the analytical results of the sampling plan pursuant to Clause 23 of this Licence, shall submit a report for the approval of the Director containing at minimum:
  - a. the raw data collected;
  - b. a discussion of the sampling and analytical portions of the program including any anomalies of sampling and analysis; and
  - c. a discussion of the significance of the data gathered with specific attention to:
    - i. the significance for potential acute and chronic impacts to health or environment from exposure to concentrations of the compounds detected;
    - ii. the need for risk assessment of the impact of emissions;
    - iii. the need for the establishment of ambient air monitoring stations;
    - iv. the need for dispersion modeling of emissions;
    - v. results and conclusions of the QA/QC program; and
    - vi. other issues as may be determined by the Director.
28. The Licencee, upon the written request of and in a timeframe stipulated by the Director, shall comply with any air emission or ambient air quality criteria specified by the Director for any pollutant of concern to the Director which has been identified pursuant to Clauses 3 or 23 of this Licence.

### **Respecting Ambient Air Quality Monitoring**

29. The Licencee shall submit, upon the written request and for the approval of the Director, a program for:
  - a. the sampling, analysis and reporting of levels of pollutants, as determined by the Director, at a selected location(s) beyond the property boundaries of the Development; and
  - b. the location, installation and operation of a meteorological monitoring station.
30. The Licencee shall:
  - a. implement the approved program submitted pursuant to Clause 29 of this Licence within a timeframe stipulated by the Director; and
  - b. submit a report within 60 days of the receipt of the analytical results of the sampling plan pursuant to Clause 29 of this Licence for the approval of the Director containing at minimum:
    - i. the raw data collected;
    - ii. a discussion of the sampling and analytical portions of the program including any anomalies of sampling and analysis; and
    - iii. a discussion of the significance of the data gathered with specific attention to:
      - A. the significance for potential acute and chronic impacts to health or environment from exposure to concentrations of the compounds detected;
      - B. the need for risk assessment of the impact of emissions;
      - C. the need for the establishment of ambient air monitoring stations;

- D. results and conclusions of the QA/QC program; and
- E. other issues as may be determined by the Director.

### **Respecting Chemical Storage and Spill Containment**

31. The Licencee shall comply with all the applicable requirements of:
- a. Manitoba Regulation 188/2001, or any future amendment thereof, respecting the *Storage and Handling of Petroleum Products and Allied Products*;
  - b. The Dangerous Goods Handling and Transportation Act, and regulations issued thereunder, respecting the handling, transport, storage and disposal of any dangerous goods brought onto or generated at the Development; and
  - c. the Office of the Fire Commissioner – Province of Manitoba.
32. The Licencee shall provide containment for all vessels containing chemicals and in each area of the development where the chemicals are stored, loaded, transferred, used or otherwise handled, in compliance with the National Fire Code of Canada (1995), or any future amendment thereof, such that any product leakage or spillage and any contaminated liquid generated is contained within the Development and contamination of groundwater is prevented.
33. The Licencee shall, in a manner approved by the Director, remove and dispose of all spilled dangerous goods.

### **Respecting Solid Waste**

34. The Licencee shall dispose of all solid waste generated from any activity at the Development, which is not recycled, only to a waste disposal ground operating under the authority of a permit issued pursuant to Manitoba Regulation 150/91 or any future amendment thereof, or a Licence issued pursuant to The Environment Act.

### **Respecting Sanitary Waste Disposal**

35. The Licencee shall discharge sanitary wastes only to a sewerage system.

### **Respecting Waste Water**

36. The Licencee shall collect all waste waters including but not limited to plate rinses, spent solutions, backwashes, drag-outs, scrubber washes, sludges, etc. which are generated by any processes associated with anodizing, and:
- a. treat the waste waters by means of a waste water treatment system prior to discharge to a sewage disposal system; or
  - b. dispose of the waste waters according to the provisions of The Dangerous Goods Handling and Transportation Act, C.C.S.M., c. D12.

### **Respecting Record Keeping**

37. The Licencee shall compile, maintain and keep onsite and available for inspection by an Environment Officer, monthly records containing data from the latest 24 month period including:
- a. total hours of application of current to tank(s) containing chromic acid in the anodizing facility for the current month and the accumulated previous consecutive 12 month period; and
  - b. volume per week of liquid produced by the wastewater system and discharged to sewer.
38. The Licencee shall have the monthly data prepared in Clause 37 of this Licence, available for review not later than 15 days from that month's end.
39. The Licencee shall submit reports of the monthly data prepared in Clause 37 of this Licence, to the Director



upon request.

### **Respecting Emergency Response Planning**

40. The Licencee, within 120 days of the issuance of this Licence, or other time frame approved by the Director, shall submit for approval of the Director, a contingency plan in accordance with the Manitoba Industrial Accidents Council (MIAC) *Industrial Emergency Response Planning Guide*, outlining procedures to be used in the event of a leak, spill, fire, or other hazardous condition at the Development.

### **Respecting Financial Assurance**

41. The Licencee, within 90 days of the issuance of this Licence, shall post with the Manitoba Department of Conservation in the amount of \$100,000 Cdn:
  - a. a permit bond issued by a surety company licenced to do business in the Province of Manitoba;
  - b. an irrevocable letter of credit; or
  - c. another acceptable security satisfactory to the Director.

This permit bond, irrevocable letter of credit, or other security and renewals thereof shall remain in place for the duration of the operation and decommissioning of the facility. The Director may order forfeiture of the permit bond, irrevocable letter of credit, or other security, either in whole or in part, by giving written notice to that effect to the Licencee, upon the Director being satisfied that the Licencee is in breach of any specification, limit, term or condition of this Licence, or for reimbursement of any costs or expenses incurred by the Province of Manitoba in rectifying environmental damage caused or contributed to by the operation of the facility.

42. The Licencee shall, within 90 days of the issuance of this Licence, provide to the Director confirmation of Environmental Impairment Liability insurance providing coverage subject to a minimum limit of \$1,000,000 Cdn per occurrence or claim, including coverage for gradual, and sudden and accidental pollution. Coverage to include on-site and off-site clean up costs, and be placed with insurers satisfactory to the Province of Manitoba. The Province of Manitoba is to be added as an Additional Insured on the policy. The policy shall contain a clause stating that the Insurer will give Manitoba 60 days prior written notice in case of a reduction in coverage or policy cancellation.

### **REVIEW AND REVOCATION**

- A. Environment Act Licence No. 1713 S3 RR is hereby rescinded.
- B. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.
- C. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Director may require the filing of a new Proposal pursuant to Section 10 of The Environment Act.

"original signed by"

**Larry Strachan, P. Eng.**  
**Director**  
**Environment Act**

**Client File No.: 4971.00**