LICENCE APPLICATION STRATEGY

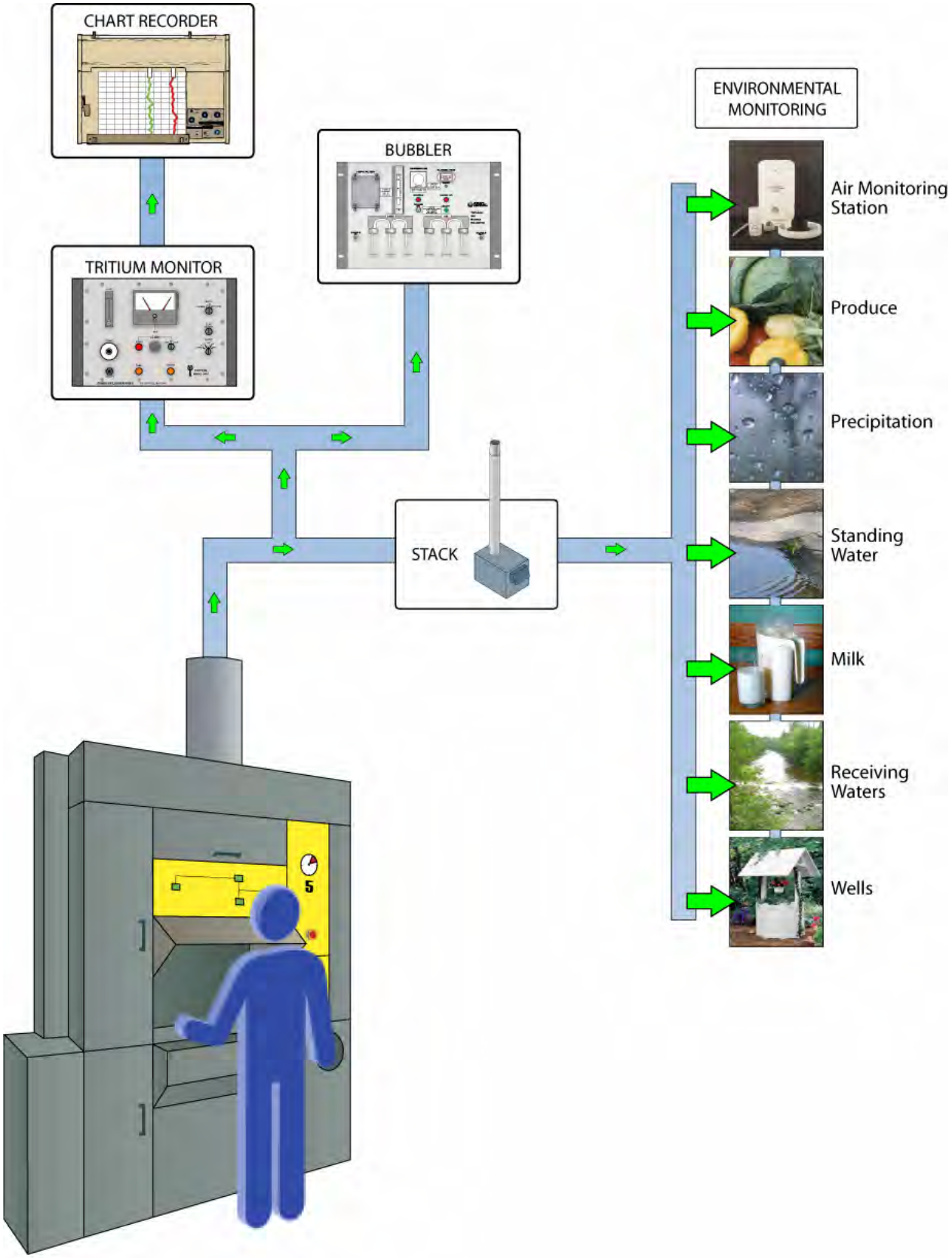
PURPOSE

- Allow licensed activities that would ensure a financially viable business
- Allow resources to further assess groundwater conditions and remediation options
- Allow resources to fund financial guarantee for decommissioning

PROPOSAL

- Propose frequent interaction with public interest groups and the community
- Propose to operate only one piece of equipment to process tritium at a time
- Propose that no processing shall take place during the occurrence of any type of precipitation
- Propose not to seek approval of a precipitation diversion system
- Propose to operate well within the yearly release limits listed in current possession licence

MONITORING OF EMISSIONS



AIR EMISSIONS

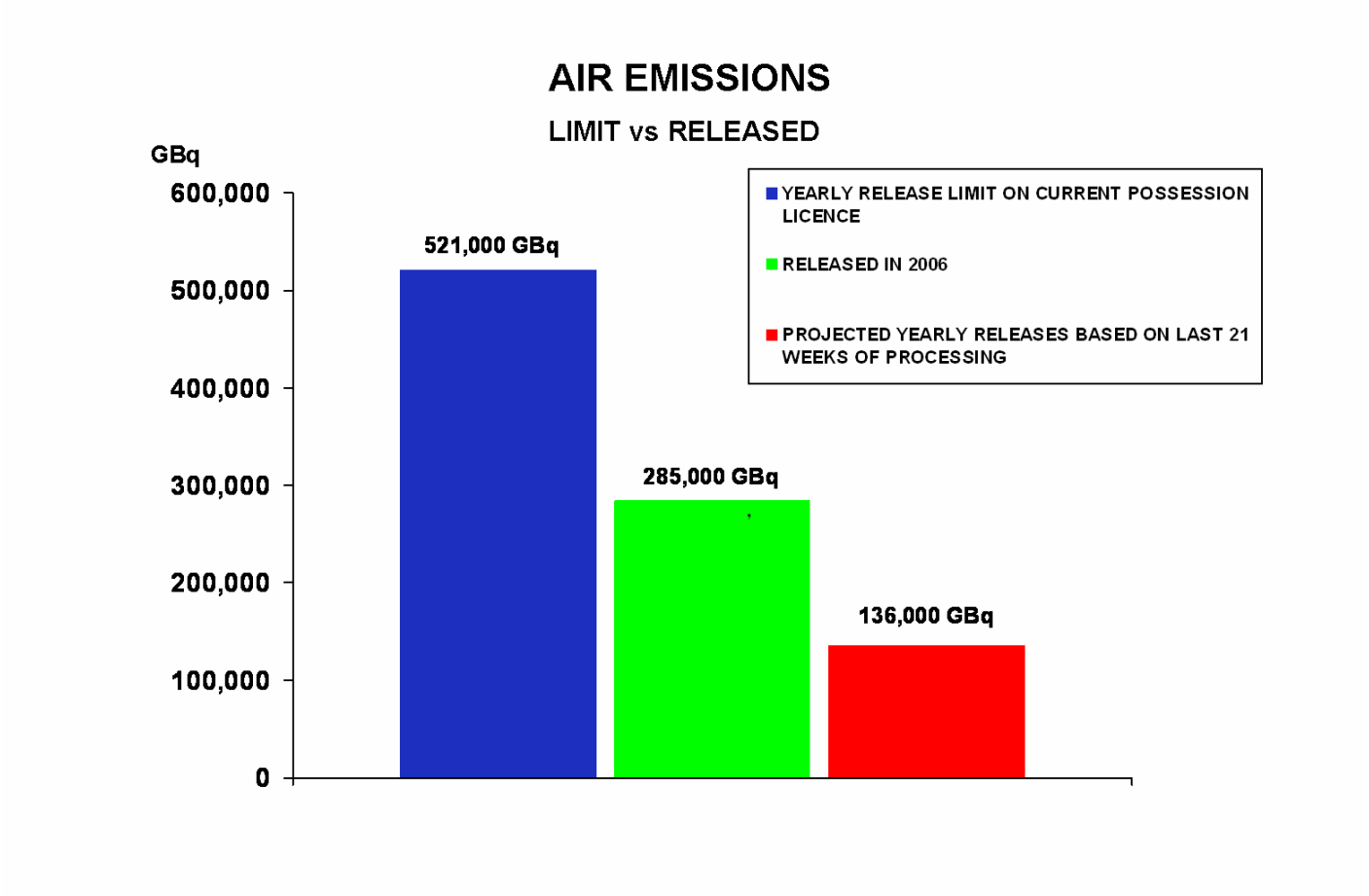
•Reduction in total emissions from mitigation measures introduced in 2006 by SRB:

	2005	2006	LAST 21 WEEKS OF OPERATION
Tritium released/processed	5.28%	1.64%	0.78%

•Mitigation measures focused on the main process which is the filling process:

	2005	2006	LAST 21 WEEKS OF OPERATION
Tritium released/processed	3.94%	1.26%	0.042%
Tritium released per cycle (GBq)	107	36	1.24

•Propose to operate to limit in current licence which would result in a dose to the public of less than 0.050 mSv or 5% of the limit of 1 mSv:



HISTORICAL AIR EMISSIONS

- SRB's emissions have always been below the limits set by the Canadian Nuclear Safety Commission.

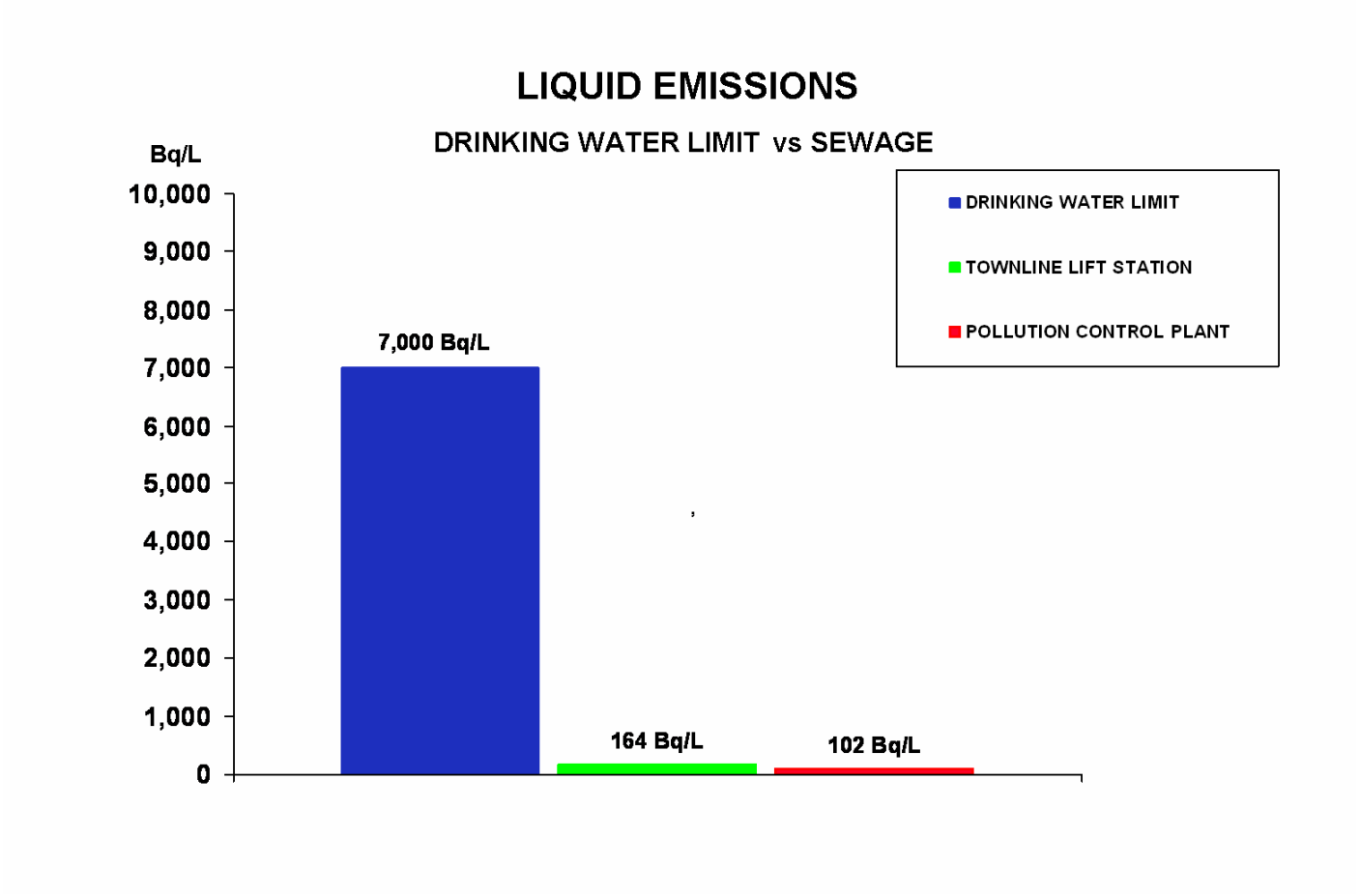
- SRB's emissions have been steadily reduced since 2000:

YEAR	RELEASED (GBq)
1991	1,474,530
1992	2,408,820
1993	1,415,630
1994	2,080,980
1995	2,422,190
1996	2,894,372
1997	9,705,789
1998	14,254,578
1999	7,297,123
2000	17,989,660
2001	13,869,492
2002	9,489,636
2003	6,758,258
2004	4,315,251
2005	1,224,412
2006	284,645

LIQUID EMISSIONS

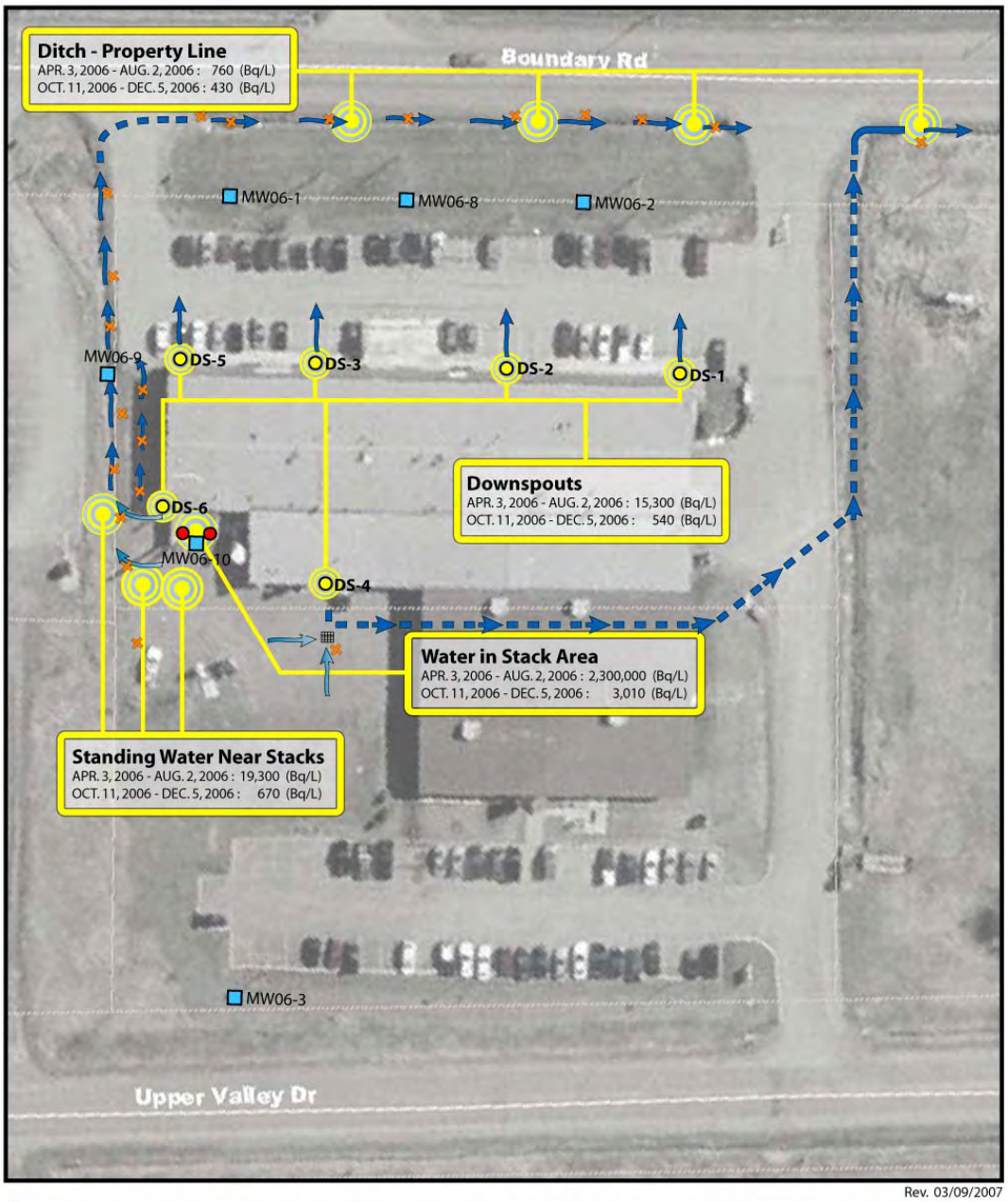
•Measured and analyzed at point of release by a third party (AECL).

•Measured daily by Pembroke PCP staff and analyzed by a third party (AECL):



IMPACT ON GROUNDWATER WITH PROPOSED LICENCE

DESCRIPTION	April 3 - August 2, 2006 Before mitigation measures implemented Operating during periods of precipitation	October 11 - December 5, 2006 After mitigation measures implemented Not operating during periods of precipitation
Water dripping from stacks	2,300,000	3,010
Standing water near stacks	19,300	670
Downspouts	15,300	540
Ditches property line	760	430



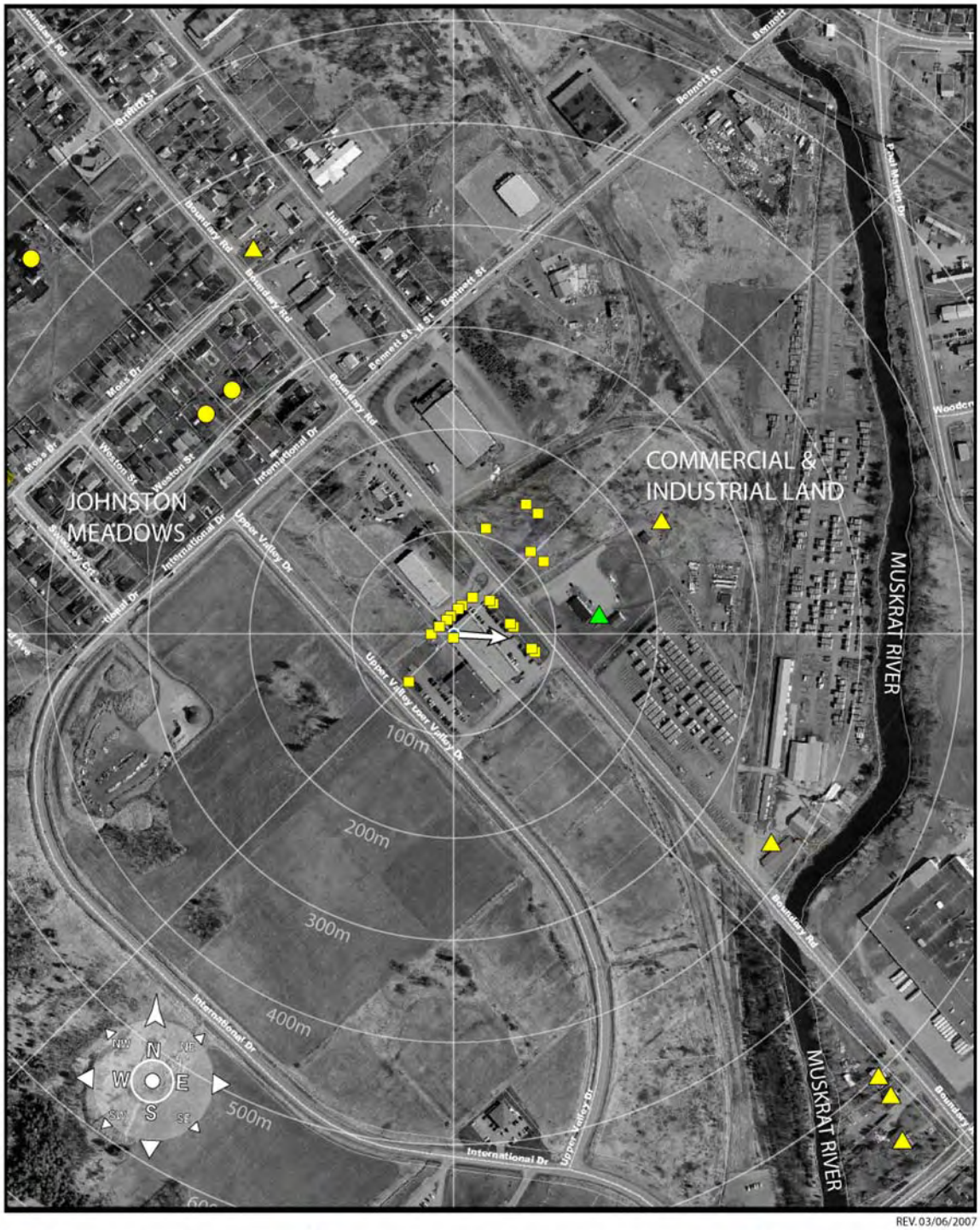
CONTINUING GROUNDWATER WORK

- Measured and analyzed by a third party (AECL).
- Results provided to all well owners.
- 13 residential and business wells monitored every 4 months, highest is 32% of drinking water limit.
- 5 monitoring wells on CN property monitored every 4 months.
- 15 monitoring wells on SRB site monitored monthly.

WELL I.D.	DISTANCE FROM STACK (meters)	DESCRIPTION	JULY 2007 (Bq/L)
RW-1	465	413 BOUNDARY ROAD	1,370
RW-2	1,100	185 MUD LAKE ROAD	311
RW-3	1,100	183 MUD LAKE ROAD	358
RW-4	2,200	711 BRUHAM AVENUE	4
RW-5	2,300	171 SAWMILL ROAD	18
RW-6	1,400	40987 HWY 41	70
RW-7	1,600	40925 HWY 41	38
RW-8	700	204 BOUNDARY ROAD	294
RW-9	650	206 BOUNDARY ROAD	269
RW-10	625	208 BOUNDARY ROAD	2
B-1	160	SUPERIOR PROPANE OFFICE	1,022
B-2	250	SUPERIOR PROPANE TRUCK WASH	2,222
B-3	385	INTERNATIONAL LUMBER OFFICE	6
CN-1S	125	CN PROPERTY	2,326
CN-1D	130	CN PROPERTY	2,806
CN-2	150	CN PROPERTY	2,801
CN-3S	165	CN PROPERTY	1,917
CN-3D	160	CN PROPERTY	1,239
MW06-1	50	SRB SITE	47,489
MW06-2	75	SRB SITE	4,365
MW06-3	50	SRB SITE	3,187
MW06-8	55	SRB SITE	202
MW06-9	25	SRB SITE	1,866
MW06-10	0	SRB SITE	46,379
MW07-11	75	SRB SITE	866
MW07-12	55	SRB SITE	106
MW07-13	50	SRB SITE	9,463
MW07-14	40	SRB SITE	2,526
MW07-15	25	SRB SITE	314
MW07-16	15	SRB SITE	4,927
MW07-17	15	SRB SITE	109
MW07-18	10	SRB SITE	100,612
MW07-19	20	SRB SITE	13,852

- From the data gathered our consultants determined that the groundwater flow along the top of bedrock was in the direction of the Muskrat River.

- The data strongly suggests that any tritium originating from the stack area has remained within the property boundary to date.



PUBLIC RELATIONS

- A Public Relations Coordinator function has been added to our organization.

- A Public Relations Material Designer function has been added to our organization.

- We will perform more frequent community surveys to get a better understanding of the community's concerns.

- We will also frequently work with public interest groups and those most concerned about our operations to get a better understanding of what is required to gain their confidence.

Betalight™

WWW.BETALIGHT.COM

SRBT

ISO 9001

June 19, 2006 (7)

Company Background

- SRB has been in operation since 1991 and is located at 320 Boundary Road in Pembroke.
- Our company has steadily grown to employ 36 hard working local residents.
- SRB is a Class 1B Nuclear Facility regulated by the Canadian Nuclear Safety Commission (CNSC).
- We are totally committed to protecting the local environment, our employees, the public and to meeting the safety requirements of the CNSC.

What is a Betalight™?

- All products manufactured and designed by SRB use Betalights™.
- A Betalight™ is a sealed glass capsule internally coated with a phosphoresecent powder and filled with a radioactive gas called tritium to produce continuous light.
- First developed in the 1960's, Betalights™ were initially deployed within the defense and transportation industries (ie: backlighting of instrument panels and switch lighting).
- They can be manufactured in a variety of shapes, sizes and colours.
- By using varying amounts of tritium, the brightness of the Betalight™ can be controlled as well as the life time for the Betalight™ to produce a desired or required brightness.

How Does a Betalight™ Generate Light?

- When tritium decays, an electron is emitted from the nucleus.
- The electron is a source of energy that interacts to energize a phosphorescent powder which produces light.
- This is achieved by positioning the phosphorescent powder in close proximity to the gas, enabling the electrons to interact with the powder, causing it to emit photons. These photons of light energy are like those in a TV picture tube or a computer monitor, but instead use the energy of the electrons emitted from the tritium rather than from electricity.
- These electrons, or beta particles, emitted by the decay of tritium can only travel short distances in air (about 4.5 mm). The electrons do not have sufficient energy to penetrate even a single sheet of paper. It is therefore essential that the gas is in close proximity with the phosphorescent powder so that the electrons can interact. This is achieved by placing the powder on the inside surface of the glass capsule where it can be readily energized.

Glassblowing

Coating

Tritium Processing

Assembly

Machining

Why Choose Betalights™?

- Betalights™ are absolutely reliable.
- Betalights™ do not require batteries, filament or incandescent bulbs or switches.
- Betalights™ do not require ambient light for charging.
- Betalights™ are a continuous light source.
- Betalights™ are compatible with night-vision equipment.
- Betalights™ do not disrupt a soldier's acquired night vision.
- Betalights™ are extremely lightweight and compact.
- Betalights™ are highly suitable for portable equipment.
- Betalights™ are maintenance-free during a long service life of up to 20 years.
- Betalights™ will continue to operate normally in temperatures ranging from -70˚C. to 100˚C and in high humidity, even when immersed in water.
- Betalights™ do not produce electrical noise and are safe for use in hazardous areas.
- Betalights™ make useful contibutions to energy conservation.

Description of Manufacturing Processes

- Our products are manufactured to strict procedures audited on a regular basis by a number of independant third parties from government and industry.
- Our company is ISO 9001 registered, ensuring all processes are performed in an organized, controlled and repeatable manner.
- Any radioactive waste generated from the facility is disposed to a CNSC licensed waste facility or by other means with the approval of the CNSC.
- During the manufacturing process small quantities of tritium are released into the environment through our two exhaust stacks.
- Tritium is our single largest cost and precautions are taken during manufacturing to ensure emissions to the environment are minimized.
- SRB has implemented a number of initiatives to reduce emissions to the environment including the installation of a test tritium removal device in December 2005.
- Our staff are continually trained and supervised to ensure that their health and safety are maintained.

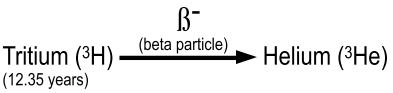
Outline of Company Products

- Our products are used in safety and emergency applications all over the world.
- Without electricity, batteries or any other source of power, our products will continue to generate light and guide people to safety in buildings and airplanes.
- SRB also manufactures many illuminated products used by Canadian, British, American and other peacekeeping troops.
- We also supply a variety of light sources for use in watches, gun sights, compasses, gauges, dials and other lighting applications.
- The energy emitted from tritium does not penetrate Betalights™ , so there is no external radiation hazard from our products.
- The Betalights™ within each device and the devices themselves are thoroughly tested to minimize the possibility of breakage.
- In the unlikely event that an exit sign containing 20 curies of tritium is broken, the dose to an individual would be less than the annual public dose limit set by the CNSC of 1.0 millisieverts (mSv) and would depend on the amount of tritium left in the device and the size and ventillation in the room where the device is broken.

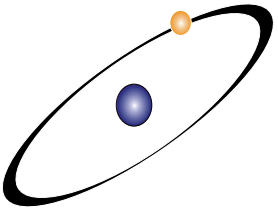
Beta Radiation

- Beta Radiation is an electron emitted by an unstable nucleus.It does not normally penetrate beyond the top layer of skin.[6]

Tritium



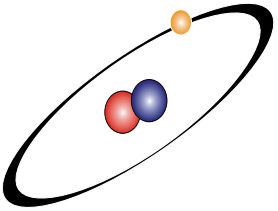
- Tritium is a colorless and odorless radioactive isotope of hydrogen.[1]
- People are exposed to small amounts of tritium every day, since it is widely dispersed in the environment and in the food chain.[1]
- Tritium is produced naturally in the upper atmosphere. Tritium is also produced during nuclear weapons explosions and as a byproduct in reactors. Tritium is also used in studies investigating the safety of potential new drugs.[1]
- Tritium enters the body when people swallow tritiated water, and may also enter the body when people inhale tritium as a gas in the air, and absorb it through their skin.[1]
- Once tritium enters the body, it disperses quickly and is uniformly distributed throughout the body. Tritium is excreted through the urine within a month or so after ingestion.[1]



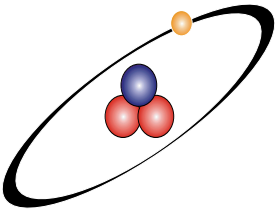
Hydrogen ^{1}H
1 electron
1 proton

Effects on the Environment and the Public

- Based on monitoring results, at maximum, the dose to a child or adult from SRB would be less than 0.2 mSv/year, a fifth of the public dose limit of 1.0 mSv/year. This assumes this child or adult resides very close to SRB, breathing air due to the emissions from SRB, drinking well water or formula mixed with well water and assuming this individual ate 100% of their diet from their home garden.
- Since SRB has been in operation, radiation doses to the public have been well below the public dose limit of 1.0 mSv/year, and have not caused an unreasonable risk to the health of the public.
- Below 50 to 100 mSv, which includes occupational and environmental exposures, risks of health effects are either too small to be observed or are nonexistent.[2]
- The International Commission of Radiological Protection (ICRP) have however attempted to determine the probability of fatal and non-fatal cancers, and hereditary effects from any dose of radiation. The probability in total is 0.000073 per mSv.[3] Therefore 15 out of a million people could possibly develop these effects if every individual received a dose of 0.2 mSv.



Deuterium ^{2}H or D
1 electron
1 proton
1 neutron



Tritium ^{3}H or T
1 electron
1 proton
2 neutrons

Effects	Detriment (per mSv)
Fatal cancer	0.000050
Non fatal cancer	0.000010
Severe hereditary effects	0.000013
Total	0.000073

3

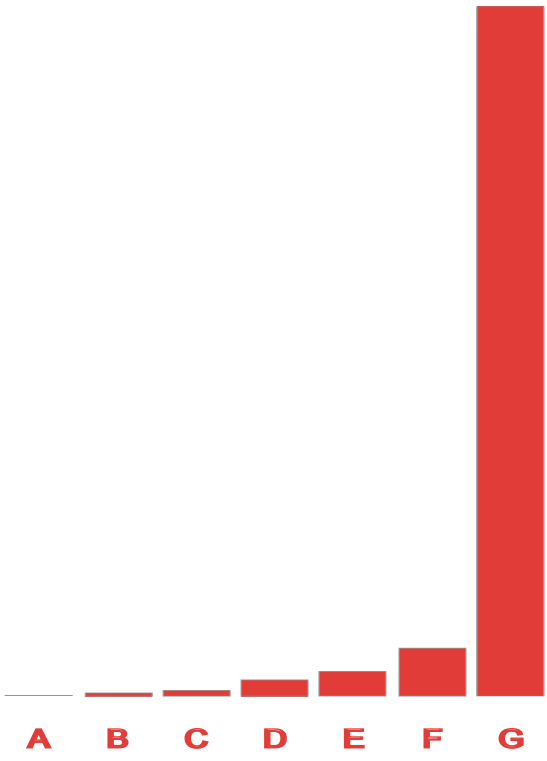
Monitoring

• SRB continuously monitors tritium releases and the local environment to ensure regulatory compliance and public safety. Results are communicated to the CNSC in annual compliance reports which are also available on our website or by contacting the company:

WHAT IS MONITORED	FREQUENCY
Facility stack emissions	Weekly
Environment with passive air samplers	Monthly
Liquid effluent	Daily
Staff urine	Weekly
Locally grown vegetables	Yearly
Local dairy products	Yearly
Precipitation, wells and pools	Random

Public Dose in Perspective

mSv		
100.0	G	**994 out of 1000 individuals exposed to 100 mSv would not develop cancer.**[4] **Risk of disease or death is increased by 10% among those who receive 100 mSv.**[5] **(G on Graph)**
7.0	F	**Brain Scan.**[6] **(F on Graph)**
3.7	E	**The highest dose to an SRB employee (in 2005). (E on Graph)**
2.4	D	**On average, public radiation exposure due to all natural sources.**[6] **(D on Graph)**
1.0	C	**CNSC annual public dose limit. (C on Graph)**
0.5	B	**Abdomen x-ray.**[6] **/ The average dose to SRB employees (in 2005). (B on Graph)**
0.2	A	**Maximum typical annual dose to the public due to SRB. (A on Graph)**



All Sources of Radiation

• Radiation enters our lives in a variety of ways. It arises from natural processes, such as the decay of uranium in the Earth, and from artificial procedures like the use of X rays in medicine. The annual dose, averaged over the population of the world, is about 2.8 mSv in total. Over 85 per cent of this total is from natural sources with about half coming from radon decay products in the home.[6]

Natural Radiation

Cosmic Radiation

- Cosmic rays are mainly protons of uncertain origin in space and very high energies that reach our atmosphere in fairly constant numbers. The annual effective dose from cosmic rays at ground level is about 0.4 mSv, on average. Most people live at low altitudes, and so experience similar annual doses from cosmic radiation. However, in some areas at considerable altitude for example, Denver in the Rocky Mountains, residents may receive annual doses several times higher than those people living at sea level.[6]

Gamma Radiation

- All materials in the Earth's crust contain radionuclides. Energy from natural activity deep in the Earth contributes to the shaping of the crust and the maintenance of internal temperatures. This energy comes mainly from the decay of the radioactive isotopes of uranium, thorium, and potassium. The average effective dose from natural gamma rays is about 0.5 mSv in a year. Actual values vary appreciably and some people may receive doses a few times higher or lower.[6]

Radon inhalation

- Radon gas is a particularly significant source of exposure to natural radiation. If buildings are well ventilated this accumulation of radon will not be marked. However, in many generally colder countries, buildings are constructed with more emphasis on retaining heat and preventing draughts. They are, therefore, often poorly ventilated, and radon concentrations indoors can be many times higher than those outdoors. Radon concentrations in buildings are also very dependent on the local geology and can vary a great deal between different part of a country and even from building to building in the same area. The worldwide average annual effective dose from the decay products of radon is estimated to be about 1.2 mSv. In some countries the national average is several times higher.[6]

Internal irradiation

- Other radionuclides from the uranium and thorium series, in particular lead-210 and polonium-210, are present in air, food and water and therefore irradiate the body internally. Potassium-40 also comes into the body with the normal diet. The average effective dose from these sources of internal radiation is estimated to be 0.3 mSv in a year.[6]

Total Dosage Due to Natural Radiation

- The total average effective does from natural radiation is about 2.4 mSv in a year, but doses can vary a great deal.[6]

Source	Worldwide average dose (mSv)	Typical range dose (mSv)
Cosmic radiation	0.4	0.3 to 1.0
Gamma radiation	0.5	0.3 to 0.6
Radon inhalation	1.2	0.2 to 10
Internal irradiation	0.3	0.2 to 0.8
Total (rounded)	2.4	1.0 to 10

Other Than Natural Radiation

Diagnostic radiation

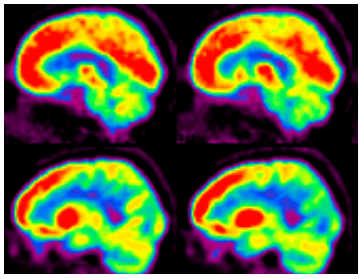
• In a conventional X ray examination, radiation from a machine passes through the patient.[6]

Examination	Conventional x-ray Dose (mSv)
Head	0.07
Teeth	less than 0.1
Chest	0.1
Abdomen	0.5
Pelvis	0.8
Lower spine	2
Lower bowel	6
Limbs and joints	0.06

Nuclear medicine

• For a diagnostic procedure in nuclear medicine, the patient is given a radionuclide in a carrying substance, such as a pharmaceutical, which is preferentially taken up by the tissue or organ under study. Administration may be by injection, ingestion, or inhalation. The radionuclide emits gamma rays.[6]

Organ scan	Effective Dose (mSv)
Brain	7.0
Bone	4.0
Thyroid, lung	1.0
Liver, kidney	1.0



Air travel

• Exposure to passengers and crew due to cosmic radiation.[6]

Cities	Effective Dose (mSv)
Vancouver to Honolulu	0.0142
Montreal to London	0.0478
Helsinki to New York	0.0497
London to Tokyo	0.0670
Paris to San Francisco	0.0849

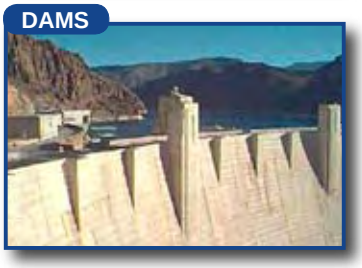
Reference Documentation

1. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, TRITIUM, http://www.epa.gov
2. HEALTH PHYSICS SOCIETY, Radiation Risk In Perspective, Richard J. Burke Jr., Executive Secretary Health Physics Society, http://www.hps.org
3. ICRP PUBLICATION 60, 1990 Recommendations of the International Commission of Radiological Protection,PERGAMON PRESS
4. HEALTH PHYSICS SOCIETY, Answer to Question #4703 Submitted to “Ask the Experts”, http://www.hps.org
5. INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, World Health Organization, Cancer risk following low doses of ionising radiation - British Medical Journal, June 29, 2005, http://www.iarc.fr
6. INTERNATIONAL ATOMIC ENERGY AGENCY, Radiation, People and the Environment, http://www.iaea.org

FISHING

THEATRES

DAMS



HELICOPTERS

TUNNELS

MINE CLEARING

TROOPS

MILITARY AIRCRAFT

MILITARY VEHICLES

Contact Information

For more information contact:

Stephane Levesque
President

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Tel.: (613) 732-0055
Fax: (613) 732-0056
Email: stephane@betalight.com


CERTIFICATE OF REGISTRATION

Quality Management System

BSI

REGISTERED

BSI Management Systems

An ISO 9001-2000 Registered Company

For sales:

SRB Technologies (Canada) Inc.

320-140 Boundary Road
Pembroke, Ontario
Canada
K8A 6W5

Tel.: (613) 732-0055
Fax: (613) 732-0056

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Web: www.betalight.com

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Web: www.srbtechnologies.com

SRBT
ISO 9001

Your file / Votre référence

Our file / Notre référence

2.02

AMENDMENT

NUCLEAR SUBSTANCE PROCESSING FACILITY POSSESSION LICENCE

SRB TECHNOLOGIES (CANADA) INCORPORATED

Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and its associated Regulations.

I) LICENCE NUMBER: **NSPFPL-13.00/2008**

II) LICENSEE: This licence is issued to:

SRB Technologies (Canada) Incorporated
320 - 140 Boundary Road
Pembroke, Ontario
K8A 6W5

III) AMENDMENT: **No. 1**

Pursuant to section 24(2) of the *Nuclear Safety and Control Act*, this licence is hereby amended as follows:

1. Part IV) LICENSED ACTIVITIES, paragraph (b) is deleted and replaced with the following:

   (b) possess, transfer, manage and store the nuclear substances that are associated with the facility described in (a); and

2. Part V) condition 2.1 is deleted and replaced with the following:

   2.1 The licensee shall not import, obtain, acquire or receive additional nuclear substances, except in the following cases:

(a) The licensee can import, obtain, acquire and receive tritium in relation to article 28(2) of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

(b) The licensee can import, obtain, acquire and receive tritium filled light sources for distribution and assembly into radiation devices for distribution.

3. A new paragraph has been added in Part IV) LICENSED ACTIVITIES:

(c) possess a maximum of 6,000 TBq of tritium in any form.

IV) AMENDMENT REQUESTED:

Application for Licence Amendment of Class 1B Nuclear Facility from S. Levesque of SRB Technologies (Canada) Inc. to H. Rabski of CNSC, date February 23, 2007. CNSC Document Number 1358313.

V) DATE OF AMENDMENT:

The Commission, as a panel, made the decision for the amendment on April 12, 2007.

The foregoing amendment is consolidated in the revised Class IB Nuclear Substance Processing Facility Possession Licence No. NSPFPL-13.01/2008, attached hereto as Schedule 1, which replaces Nuclear Substance Processing Facility Possession Licence No. NSPFPL-13.00/2008

SIGNED at OTTAWA, this 16 day of May 2007.

Linda J. Keen, President,
on behalf of the Canadian Nuclear Safety Commission

Your file / Votre référence

Our file / Notre référence

2.02

NUCLEAR SUBSTANCE PROCESSING FACILITY POSSESSION LICENCE

SRB TECHNOLOGIES (CANADA) INCORPORATED

Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and its associated Regulations.

I) LICENCE NUMBER: **NSPFPL-13.01/2008**

II) LICENSEE: Pursuant to section 24 of the *Nuclear Safety and Control Act*, this licence is issued to:

SRB Technologies (Canada) Incorporated
320 - 140 Boundary Road
Pembroke, Ontario
K8A 6W5

III) LICENCE PERIOD: This licence is valid from **February 1, 2007** to **July 31, 2008**, unless otherwise suspended, amended, revoked or replaced.

IV) LICENSED ACTIVITIES:

This licence authorizes the licensee to:

(a) maintain a nuclear substance processing facility (hereinafter the "facility") at the location named in Part II of this licence, and comprising the facilities described in Appendix A to this licence; Amended 2007-04-12

(b) possess, transfer, manage and store the nuclear substances that are associated with the facility described in (a); and Amended 2007-04-12

(c) possess a maximum of 6,000 TBq of tritium in any form.

V) CONDITIONS:

The licensee shall comply with the following conditions, established pursuant to subsection 24(5) of the *Nuclear Safety and Control Act*.

1. GENERAL

1.1 The licensee shall not process or use tritium for the purposes of manufacturing gaseous tritium light sources.

1.2 The licensee shall not carry out remediation activities without the approval of the Commission or a person authorized by the Commission.

1.3 The licensee shall perform emission monitoring and stack verification by a qualified third party.

1.4 The licensee shall establish stack emission action levels associated with the activities authorized by the licence acceptable to the Commission or a person authorized by the Commission by May 31, 2007.

1.5 The appendices attached to this licence and the contents of the documents cited in those appendices form part of this licence.

1.6 The licensee shall not make any change to any of the documents listed in Appendices A and B without the prior written approval of the Canadian Nuclear Safety Commission (hereinafter "the Commission"), or a person authorized by the Commission. Where a change to any of the documents in Appendix A or Appendix B constitutes an amendment to this licence, the request for approval shall be submitted to the Commission in accordance with subsection 24(2) of the *Nuclear Safety and Control Act*.

1.7 The licensee shall establish and continuously maintain a register that lists all current documentation relevant to the licensing of the facility.

1.8 The licensee shall conduct an organizational study to define the management capacity, which is appropriate to the licensed activities, needed at the facility to manage the safety programs, the workers and contractors by July 31, 2007.

2. POSSESSION OF NUCLEAR MATERIALS

2.1 The licensee shall not import, obtain, acquire or receive additional nuclear substances, except in the following cases:

Amended 2007-04-12

(a) The licensee can import, obtain, acquire and receive tritium in relation to article 28(2) of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

(b) The licensee can import, obtain, acquire and receive tritium filled light sources for distribution and assembly into radiation devices for distribution.

2.2 Subject to condition 1.1, and without limiting the applicability of the *Nuclear Safety and Control Act*, its Regulations or any other condition of this licence for the possession of nuclear substances at the facility, the operation of the facility shall be governed by and be in accordance with the documents listed in Appendices A and B.

2.3 The licensee shall control, monitor and record releases of nuclear substances from the nuclear facility, and such releases shall not exceed the applicable limits as specified in Appendix C to this licence.

2.4 The licensee shall control, monitor and record releases of hazardous substances from the facility.

2.5 For the purpose of limiting, during the lifetime of the facility, the risks related to the failure or unavailability of any structure, system or component whose performance may affect the possession of nuclear substances or security of the facility, the licensee shall establish, document and implement a maintenance program.

2.6 The maintenance program shall include testing and inspection and shall be of such quality and be performed in such a manner that the availability, reliability and effectiveness of any structure, system or component remain consistent with the document *Safety Analysis Report*, listed in Appendix A (hereinafter "the Safety Report").

3. MODIFICATIONS

3.1 The licensee shall not modify any building, structure, component or equipment at the facility as described in the document in Appendix A, or modify the facility's operating conditions, methods or procedures, without prior written approval of the Commission, or a person authorized by the Commission.

4. NUCLEAR SUBSTANCES

4.1 The licensee's employees shall handle radioactive nuclear substance in accordance with written work procedures. These procedures shall be provided to all employees and shall be available wherever radioactive nuclear substances are handled or stored.

4.2 Unsealed tritium shall be stored on uranium beds only.

5. DISPOSAL

5.1 The licensee shall dispose of all solid waste containing nuclear substances to a Canadian Nuclear Safety Commission licensed waste facility, or other manner if approved in writing by the Commission, or a person authorized by the Commission.

6. REPORTING

6.1 The licensee shall make reports to the Commission, or a person authorized by the Commission, as specified in condition 6.2 of any:

(a) situation or incident that results or is likely to result in a hazard to the health or safety of any person or the environment;

(b) unauthorized release of nuclear substances or other hazardous substances from the facility to the environment;

(c) accidental release of nuclear substances or other hazardous substances within the facility that results or is likely to result in a hazard to the environment;

(d) inaccuracy or incompleteness in the documents listed in condition 1.4 that could adversely affect the results of the safety assessment in those documents;

(e) hazard different in nature or greater in probability or magnitude than that described in the documents referred to in condition 1.6;

(f) failure of equipment, component, or process system, or an inappropriate procedure or human action that resulted in, or could have resulted in a release of a nuclear substance exceeding the release limits found in Appendix C; and

(g) failure of equipment, component, or process system, or an inappropriate procedure or human action that resulted in, or could have resulted in the release of a nuclear substance which is measurable on the chart recorder used for real time monitoring at a level equal to or greater that 10 000 microcuries per meter cubed for a duration of one hour at anytime during the course of a working day.

6.2 Except as otherwise directed or approved in writing by the Commission or a person authorized by the Commission, the reports described in 6.1 shall be made to the Commission as follows:

(a) verbally and no later than 24 hours after discovery of the events referred to in condition 6.1 (a), (b), (c), (e), (f), or (g);

(b) the licensee shall file a full written report of the situations referred to in condition 6.1, including any corrective actions taken, with the Commission or a person authorized by the Commission, within 21 working days after becoming aware of the matter.

6.3 If any action level set out in Appendix D is reached or exceeded, the licensee shall notify the Commission or a person authorized by the Commission, within 24 hours of becoming aware of the matter and shall file a final written report within 21 working days of becoming aware of the matter.

6.4 The licensee shall prepare and submit to the Commission or a person authorized by the Commission by March 31 of each year, an annual compliance report that covers the previous calendar year's operation prepared in accordance with Appendix E to this licence.

6.5 The licensee shall prepare and submit to the Commission or a person authorized by the Commission on a quarterly basis, the results of the Environmental Monitoring Program including quality assurance and quality control information, plus tritium effluent released to atmosphere and tritium effluent released to sewer.

6.6 The licensee shall provide to the Commission the results of well water tritium concentration at locations specified in Appendix F, Item 1 within 30 days of monitoring the wells.

6.7 The systematically and quantitatively groundwater analyses report specified in Appendix F, Item 2 shall be submitted to the Commission by March 31, 2007.

7. RECORDS

7.1 The licensee shall establish and maintain, in addition to any record required to be maintained pursuant to the *Nuclear Safety and Control Act* and its Regulations, and by other conditions of this licence, full and accurate records to show:

(a) the acquisition of nuclear substances including the quantity received, the form of the substance, and the name of the vendor;

(b) an inventory of all radioactive nuclear substances at the facility;

(c) the disposition of all nuclear substances acquired for use or processed by the facility, including the name and address of the recipient, a copy of the recipient's licence (if applicable), the quantity of radioactive nuclear substance, and the date of shipment;

(d) the operation of the facility, maintenance, test results, and any inspections or audits performed; and

(e) modifications to the layout or physical arrangement of the building, structure, component or equipment, operating conditions, methods and procedures.

8. FIRE PROTECTION

8.1 The licensee shall design, build, modify and otherwise carry out work related to the facility with potential to impact protection from fire in accordance with the *National Building Code*, 2005, the *National Fire Code*, 2005, and *National Fire Protection Association*, NFPA-801, 2003 edition: Standard for Fire Protection for Facilities Handling Radioactive Materials.

8.2 The licensee shall operate, maintain, test and inspect the facility in accordance with the *National Fire Code*, 2005, and *National Fire Protection Association*, NFPA-801, 2003 edition.

8.3 The licensee shall, prior to implementing any proposed modification of the facility with potential to impact protection from fire:

(a) submit the proposed modification for third party review of compliance with condition 8.1 and the standards listed therein;

(b) have the review carried out by one or more independent external agencies having specific expertise with such reviews; and

(c) submit the results of the review in writing to the Commission or a person authorized by the Commission.

8.4 The licensee shall:

(a) arrange for annual third party reviews of compliance with the requirements of the *National Fire Code*, 2005, and *National Fire Protection Association*, NFPA-801, 2003 edition;

(b) have the review carried out by one or more independent external agencies having specific expertise with such reviews; and

(c) submit the results of the review in writing to the Commission or a person authorized by the Commission.

8.5 In the event of any conflict or inconsistency between the above requirements and any requirements of the Commission pursuant to the *Nuclear Safety and Control Act* and associated Regulations, the licensee shall direct the conflict or inconsistency to the Commission or a person authorized by the Commission for resolution.

9. SECURITY

9.1 The licensee shall update its Vulnerability Threat Risk Assessment, established to meet the requirements of subsection 6(l) of the *Class I Nuclear Facilities Regulations*, and paragraphs 3(1)(*g*) and (*h*) of the *General Nuclear Safety and Control Regulations*, when any significant changes are made to the security of the facility or if the threat to the facility increases. Once an update has been completed, it shall be submitted to the Commission or a person authorized by the Commission for approval.

10. ENVIRONMENTAL MONITORING PROGRAM

10.1 The licensee shall have all activities related to the Environmental Monitoring Program conducted by a qualified third party.

11. GROUNDWATER MONITORING

11.1 The licensee shall perform the activities described in Item 1 of Appendix F.

12. DECOMMISSIONING FINANCIAL GUARANTEE

12.1 The licensee shall provide, no later than July 31, 2007, a financial guarantee for the full cost of the safe shutdown state of the facility that is acceptable to the Commission.

12.2 The licensee shall provide, no later than May 31, 2008, a financial guarantee for the full cost of the decommissioning of the facility that is acceptable to the Commission.

13. SAFEGUARDS

The licensee shall:

(a) take all necessary measures to facilitate Canada's compliance with any applicable safeguards agreement;

(b) provide the International Atomic Energy Agency, an International Atomic Energy Agency inspector, or a person acting on behalf of the International Atomic Energy Agency with such reasonable services and assistance as are required to enable the International Atomic Energy Agency to carry out its duties and functions pursuant to a safeguards agreement;

(c) grant prompt access at all reasonable times to all locations at the facility to an International Atomic Energy Agency inspector, or to a person acting on behalf of the International Atomic Energy Agency, where such access is required for the purposes of carrying on an activity pursuant to a safeguards agreement. In granting access, the licensee shall provide health and safety services and escorts as required in order to facilitate activities pursuant to a safeguards agreement;

(d) disclose to the Commission, to the International Atomic Energy Agency or to an International Atomic Energy Agency inspector, any records that are required to be kept or any reports that are required to be made under a safeguards agreement;

(e) provide such reasonable assistance to an International Atomic Energy Agency inspector or to a person acting on behalf of the International Atomic Energy Agency, as is required to enable sampling and removal or shipment of samples required pursuant to a safeguards agreement;

(f) provide such reasonable assistance to an International Atomic Energy Agency inspector or to a person acting on behalf of the International Atomic Energy Agency, as is required to enable measurements, tests and removal or shipment of equipment required pursuant to a safeguards agreement;

(g) make such reports and provide such information to the Commission as are required to facilitate Canada's compliance with any applicable safeguards agreement;

(h) make and submit reports to the Commission on the inventory and transfer of fissionable and fertile substances in accordance with the document AECB-1049/Rev. 2, Reporting Requirements for Fissionable and Fertile Substances, or as otherwise stipulated in any regulatory standard that replaces AECB-1049/Rev. 2;

(i) not, except with the prior written approval of the Commission, or a person authorized by the Commission, make changes to any aspect of the nuclear facility, nuclear facility operation, nuclear facility equipment or procedures that would affect the implementation of safeguards measures;

(j) not alter, deface or break a safeguards seal, except pursuant to a safeguards agreement; and

(k) implement measures to prevent damage to or the theft, loss or sabotage of samples collected pursuant to a safeguards agreement or the illegal use, possession or removal of such samples.

SIGNED at OTTAWA, this 16 day of May 2007

Linda J. Keen, President,
on behalf of the Canadian Nuclear Safety Commission

APPENDIX A

DESCRIPTION OF THE FACILITY

1. Safety Analysis Report (Revision II), July 4, 2006.

APPENDIX B

DOCUMENTS PERTAINING TO OVERALL OPERATION

1. SRB Technologies (Canada) Inc. *Radiation Safety Program (Revision IV)*, June 26, 2006.

2. SRB Technologies (Canada) Inc. Quality Manual, QM-01 (Rev. E), submitted as part of the information in the document *Application for Renewal of Licensing for SRB Technologies (Canada) Inc. as a Class IB Nuclear Facility*, May 23, 2006, from S. Levesque of SRBT to H. Rabski of CNSC.

3. SRB Technologies (Canada) Inc. *Emergency Plan*.

4. SRB Technologies (Canada) Inc., *E H & S Manual, Environment Health and Safety, Environment Monitoring Program Document*, February 26, 2006.

APPENDIX C

RELEASE LIMITS TO ATMOSPHERE AND SEWER SYSTEM

To Atmosphere:

Nuclear Substance and Form	**Limit (Bq/year)**
Tritium as Tritium Oxide (HTO)	1.35 E + 14
Total Tritium as Tritium Oxide (HTO) and Tritium Gas (HT)	5.21 E + 14

To Sewer System:

Nuclear Substance and Form	**Limit (GBq/year)**
Tritium – water soluble	200

APPENDIX D

ACTION LEVELS

(as indicated in the *Radiation Protection Regulations* Section 6)

Parameter	Action Level
Effective Dose for Worker	5 mSv/year 2.6 mSv/quarter year
Bioassay Result	1000 Bq/ml for any period

APPENDIX E

This Appendix outlines the information to be included in the Annual Compliance Report by licence condition of this licence.

The following information shall be included:

1. Operational review including equipment and facility performance and changes, significant events / highlights that occurred during the year.

2. Information on production including verification that limits specified in the licence was complied with.

3. Modifications including changes in organization, administration and / or procedures that may affect licensed activities.

4. Health physics information including operating staff radiation exposures including distributions, maxima and collective doses; review of action level or regulatory exceedance(s) if any, historical trending where appropriate.

5. Environmental and radiological compliance including results from environmental and radiological monitoring, assessment of compliance with licence limits, historical trending where appropriate, and quality assurance / quality control results for the monitoring.

6. Facility effluents including gaseous and liquid effluent releases of nuclear substances from the facility, including unplanned releases of radioactive materials and any releases of hazardous substances.

7. Waste management including types, volumes and activities of solid wastes produced, and the handling and storage or disposal of those wastes.

8. Updates regarding activities pertaining to safety, fire protection, security, quality assurance, emergency preparedness, research and development, waste management, tritium mitigation and training (as applicable).

9. Compliance with other federal and / or provincial Regulations.

10. A summary of non-radiological health and safety activities, including information on minor incidents and lost time incidents.

11. Public information initiatives.

12. Forecast for coming year(s).

APPENDIX F

ADDITIONAL GROUNDWATER MONITORING

The following additional activities shall be performed by the licensee:

1. Sampling

Location	Frequency
On site wells	monthly
CN wells	the months of March, July and November
Residential wells	the months of March, July and November

2. Reporting

The submission of a report to the Commission that systematically and quantitatively analyzes the tritium sources and their potential contribution to groundwater contamination.

Council Chambers
Pembroke, Ontario

August 7, 2007

ITEM #1: SRB Technologies Update

Stephane Levesque, President of SRB Technologies was present to update Council on SRB's licence application strategy. Also in attendance with Mr. Levesque, were Ross Fitzpatrick, SRB General Manager, Katie Belec, SRB Health Physics Technician and Dr. Richard Osborne, Ranasara Inc., SRB Consultant.

Mr. Levesque advised Council that every October SRB Technologies provides an overview of their operations to Council. At this point SRB Technologies wanted to update Council on its status with respect to their licence application to the Canadian Nuclear Safety Commission. Mr. Levesque also noted that SRB met with the Concerned Citizens of Renfrew County on July 27, 2007 to provide that group with an update as well. Mr. Levesque explained that the purpose of the licence application is to allow licenced activities that would ensure a financially viable business, to allow resources to further assess groundwater conditions and remediation options, and to allow resources to fund financial guarantee for decommissioning. Mr. Levesque noted that there is currently $80,000 in escrow. SRB is proposing to have frequent interaction with public interest groups and the community, to operate only one piece of equipment to process tritium at a time, that no processing shall take place during the occurrence of any type of precipitation, not to seek approval of a precipitation diversion system, and to operate well within the yearly release limits listed in their current possession licence. Councillor White noted that in the proposal SRB will only operate one machine at a time; she inquired how many machines were operated before. Mr. Levesque noted that there are 13 machines in total but all 13 machines weren't in operation at the same time. Councillor White and Councillor Lafreniere both commented that they were glad to see that SRB is keeping an open dialogue with the Concerned Citizens of Renfrew County. Mr. Levesque noted that one of the recommendations from the Concerned Citizens of Renfrew County was to have a third party conduct any samples for SRB, it was explained that AECL conducts these samples.

Mr. Levesque then explained how SRB monitors air emissions. It was explained that SRB has experienced a reduction in total emissions from mitigation measures introduced in 2006. Mr. Levesque also noted that SRB's emissions have always been below the limits set by the Canadian Nuclear Safety Commission, with SRB's emissions steadily reducing since the year 2000. Liquid emissions are also monitored, these are measured and analyzed at point of release by AECL and also measured daily by Pembroke Pollution Control Plant staff. Groundwater in neighbouring wells is also analyzed.

…/2

SRB has also introduced a public relations coordinator to their staff. SRB plans to perform more frequent community surveys to get a better understanding of the community's concerns and SRB also plans to work with public interest groups and those most concerned about SRB's operations to get a better understanding of what is required to gain their confidence.

LeeAnn Eckford, Treasurer/Deputy-Clerk, inquired if SRB Technologies has ever received a workers compensation application for exposure to tritium. Mr. Levesque responded that no applications have been filed, noting that the exposure to tritium is very minimal.

Mr. Levesque then thanked Council for giving SRB the opportunity to speak and to allay any concerns Council may have; he also invited members of Council to attend SRB for a tour of the facility. Mayor Jacyno thanked Mr. Levesque and his colleagues for attending this evening.