

PLAN SUMMARY – LEAD (AND ITS COMPOUNDS)

STATEMENT OF INTENT

Best Theratronics Ltd. is committed to taking a leadership role in protecting the environment. Whenever feasible, we will reduce the use of lead in compliance with all Federal and Provincial Regulations. We are committed to using our on-going continual improvement programs as a method to look for opportunities to reduce the use of lead.

OBJECTIVES

Best Theratronics will continue to work with our clients and conduct research and development to find new opportunities to reduce the use of lead. At this time, Best Theratronics does not have a set reduction target for lead usage.

DESCRIPTION OF WHY LEAD IS USED AT THE FACILITY

Best Theratronics engages in designing, manufacturing, installing, and servicing external beam teletherapy machines (isotope based) to treat cancer and self-contained blood irradiators (isotope and x-ray based) to treat prevent Graft vs. Host Disease. Lead is used in manufactured products as a shielding device from the radiation source.

RATIONALE FOR NOT IMPLEMENTING

Based upon the technical and economic feasibility review, business decisions, and available resources, none of the reduction options will be implemented at this time. Further research and development will be allocated to find feasible solutions to reduce the use of lead at the facility.

TOXIC SUBSTANCE REDUCTION PLANNER CONTACT INFORMATION

Planner Contact Information		
Planner Responsible for Making Recommendations	Jenna Boyce, P.Eng. <i>Environmental Engineer</i>	TSRP0022
	jboyce@blumetric.ca	BluMetric Environmental Inc.
	Phone: 613-839-3053 ext 274	3108 Carp Road
	Fax: 613-839-5376	Ottawa, ON, KoA 1Lo
Planner Responsible for Certification	Jenna Boyce, P.Eng. <i>Environmental Engineer</i>	Contact information if different from planner responsible for making recommendation
	jboyce@blumetric.ca	BluMetric Environmental Inc.
	Phone: 613-839-3053 ext 274	3108 Carp Road
	Fax: 613-839-5376	Ottawa, ON, KoA 1Lo

CERTIFICATIONS

The plan has not been amended since it was initially developed; the following are the certification statements from the TRA reduction plan for Lead.

11. CERTIFICATION BY HIGHEST RANKING EMPLOYEE

As of December 18, 2013, I, Richard Wassenaar, certify that I have read the toxic substance reduction plan for lead and am familiar with its contents, and to my knowledge the plan is factually accurate and, with the exception of the regulatory deadline, the plan meets all other requirements of the act and regulation. The Plan did not meet the December 31, 2012 deadline since the company is a Federally regulated nuclear facility and believed to be exempt from Provincial Regulations. The TRA Accounting and Plan were prepared for the 2012 reporting year.



Richard Wassenaar
Director, Compliance
Best Theratronics Ltd.

12. CERTIFICATION BY TOXIC SUBSTANCE REDUCTION PLANNER

As of December 18, 2013 I, Jenna Boyce certify that I am familiar with the processes at Best Theratronics Ltd. that use and create the toxic substances lead, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4(1) of the *Toxics Reduction Act, 2009* that are set out in the toxic substance reduction plan dated December 2013 and, with the exception of the regulatory deadline, the plan meets all other requirements of the act and regulation.



Jenna Boyce, P. Eng. (Planner License # TSRP0022)
Environmental Engineer
WESA, a Division of BluMetric Environmental Inc.

ANNUAL REPORT – LEAD (AND ITS COMPOUNDS)

TRACKING AND QUANTIFICATION

Reporting Year	Facility-wide Lead Quantities (kg)						Reasons for Change From Previous Year
	Used	Created	Contained in Product	Released to Air	Off-Site Disposal	Off-Site Recycling	
2012	>100,000 to 1,000,000	0	>10,000 to 100,000	0.086	0	13,725.097	-
2013	>100,000 to 1,000,000	0	>10,000 to 100,000	0.081	0	17,193.111	Change in production. Change in data accuracy. Recycling amount will vary from year to year.
2014	>10,000 to 100,000	0	>10,000 to 100,000	0.046	0	1,535.972	Change in production. Recycling amount will vary from year to year.
2015	>10,000 to 100,000	0	>10,000 to 100,000	0.033	0	26,299.749	Change in production. Recycling amount will vary from year to year, recycled 4 Theratrons.
2016	>10,000 to 100,000	0	>10,000 to 100,000	0.036	35.795	13,210.674	Change in production levels. In 2015, 4 Theratron machines were returned for recycling and approx. 30 machine heads were taken from storage and lead components were sent for recycling. This process is highly variable between years.
Change from previous year (2016 : 2015)	>10,000 to 100,000 (-)16%	0 kg 0%	> 1,000 to 10,000 (-)15%	(+) 0.003 (+)9%	(+) 35.795 (+)100%	(-) 13,089.075 (-)50%	Change in production levels. Recycling and disposal amount will vary from year to year.

Used, created and contained in product can be expressed in the following ranges:

- > 0 to 1
- > 1 to 10
- > 10 to 100
- > 100 to 1,000
- > 1,000 to 10,000
- > 10,000 to 100,000
- > 100,000 to 1,000,000

ANNUAL REPORT CERTIFICATION STATEMENT

As of May 15, 2017, I, Michael de van der Schueren, certify that I have read the reports on the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the information contained in the reports is factually accurate and the reports comply with the Toxics Reduction Act, 2009 and Ontario regulation 455/09 (General) made under the Act.

- Lead (and its compounds)



Michael de van der Schueren
Quality & Regulatory Manager
Best Theratronics Ltd.