



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Record of Proceedings, Including Reasons for Decision

In the Matter of

Licensee
Named in or
Subject to
Order

Best Theratronics Ltd.

Subject

Review by the Commission of the Designated
Officer Order Issued on August 24, 2015

Date of
Opportunity to
be Heard

September 10, 2015

RECORD OF PROCEEDINGS

Licensee named in
or subject to order: Best Theratronics Ltd.

Address/Location: 413 March Road, Ottawa, ON, K2K 0E4

Purpose: Review by the Commission of the Designated Officer Order issued
on August 24, 2015

Request Received: September 3, 2015

Date of Opportunity
to be Heard: September 10, 2015

Location: Canadian Nuclear Safety Commission (CNSC) Public Hearing
Room, 280 Slater St., 14th Floor, Ottawa, Ontario

Members present: M. Binder, Panel

Order: Amended

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Introduction

1. On August 24, 2015, a Canadian Nuclear Safety Commission¹ (CNSC) Designated Officer issued an Order to Best Theratronics Ltd. (BTL) for failure to comply with Licence Condition 1.3 of its Nuclear Substance Processing Facility Operating Licence NSPFOL-14.00/2019. The Order required BTL to immediately take specific actions and measures. Among other actions and measures, BTL was ordered to dispose of or transfer all depleted uranium, sealed sources and prescribed equipment in its possession, cease all imports and increases to its current inventory of sealed sources and prescribed equipment containing radioactive sources or depleted uranium, and limit the operation of particle accelerators. BTL was also required to report monthly to the CNSC on the disposal status and provide the CNSC with a revised Preliminary Decommissioning Plan (PDP) and Financial Guarantee proposal taking into account the changes to the facility resulting from this Order.
2. Pursuant to subsection 37(6) of the *Nuclear Safety and Control Act*² (NSCA), the Designated Officer referred the Order to the Commission for review.
3. Pursuant to paragraph 40(1)(d) of the NSCA, the Commission provided an opportunity to be heard to BTL as the licensee subject to and named in the Order. In a letter dated September 3, 2015 and sent to the Secretary of the Commission, the President of BTL requested three amendments to the Order issued to BTL on August 24, 2015.
4. This *Record of Proceedings* describes the Commission's consideration of BTL's submission regarding the Order, the review of the Order and the reasons for the decision.

Issue

5. In its review of the Order, the Commission was required to confirm, amend, revoke or replace the Order, pursuant to subsection 37(6) of the NSCA.

Opportunity to be Heard

6. Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission to review the Order. The Commission, in making its decision, considered information presented for an opportunity to be heard conducted on September 10, 2015 in Ottawa, Ontario. The Commission considered the Designated

¹ The *Canadian Nuclear Safety Commission* is referred to as the "CNSC" when referring to the organization and its staff in general, and as the "Commission" when referring to the tribunal component.

² Statutes of Canada (S.C.) 1997, chapter (c.) 9.

Officer Order, including information referred to in the Order, and received written submissions and heard oral presentations from CNSC staff (CMD 15-H114) and BTL (CMD 15-H114.1). The Commission also considered additional information from CNSC staff presented in a memorandum³ and from BTL (CMD 15-H114.1A). The opportunity to be heard was conducted in accordance with the *Canadian Nuclear Safety Commission Rules of Procedure*⁴.

Decision

7. Based on its consideration of the matter, as described in more detail in the following sections of this *Record of Proceedings*,

the Commission, pursuant to subsection 37(6) of the NSCA, confirms Conditions 2, 3 and 6 and amends Conditions 1, 4 and 5 of the Designated Officer Order issued to Best Theratronics Ltd. on August 24, 2015.

8. The Commission amends the Order as follows:

- Condition 1: Effective October 1, 2016, Best Theratronics Ltd. is not authorized to possess sealed sources, prescribed equipment containing radioactive sources or depleted uranium at the BTL facility located at 413 March Road in a quantity that would have disposal costs in excess of the value of the established Financial Guarantee.
- Condition 4: Best Theratronics Ltd. is to dispose of or transfer sealed sources at the BTL facility located at 413 March Road to a licensed facility by June 1, 2016, to dispose of or transfer prescribed equipment containing radioactive sources at the BTL facility located at 413 March Road to a licensed facility by February 1, 2016, and to dispose of or transfer depleted uranium at the BTL facility located at 413 March Road to a licensed facility by October 1, 2016, such that the inventory of any remaining sealed sources, prescribed equipment and depleted uranium shall not have a disposal cost in excess of the value of the established Financial Guarantee.
- Condition 5: Best Theratronics Ltd. is to report monthly to the CNSC on the status of the disposal of sealed sources, prescribed equipment and depleted uranium. Best Theratronics Ltd. shall include in its monthly report confirmation from the recipient licensee that the sealed sources, prescribed equipment and depleted uranium have been received, and shall inform the CNSC of the name of the licensee.

³ Memorandum to M. A. Leblanc from M. Rinker dated September 11, 2015: *Best Theratronics Ltd. Schedule for Divesting of Inventory*. (e-Doc 4838859)

⁴ Statutory Orders and Regulations (SOR)/2000-211.

Issues and Commission Findings

9. In reviewing the Order under subsection 37(6) of the NSCA, the Commission considered the reasonableness of the Order. The Commission considered the actions and measures identified in the Order and the information on which the Order was based, as identified in the Order. In this regard, and as elaborated further below, the Commission is satisfied that the Designated Officer, based on the information available, had sufficient evidence and a reasonable basis for issuing an Order to protect the health and safety of persons and the environment until the matter could come before the Commission.

Background

10. Following a hearing held on May 8, 2014, the Commission issued the Nuclear Substance Processing Facility Operating Licence NSPFOL-14.00/2019 to BTL. Since BTL had not established an adequate financial guarantee for the realization of planned decommissioning activities at the facility at the time of the hearing, the Commission, as per Licence Condition 1.3, required BTL to provide and maintain such financial guarantee in a form acceptable to the Commission by January 31, 2015.
11. Following a request from BTL, the Commission amended the licence on January 30, 2015 to extend the date of Licence Condition 1.3 to April 30, 2015 to allow BTL more time to provide revised PDP cost estimates for decommissioning to the Commission for approval and to provide an adequate Financial Guarantee. On February 20, 2015, BTL proposed a revised PDP cost estimate in the amount of CAD \$4,005,963.00 and the Financial Guarantee payment schedule for monies to be added to a Letter of Credit that had been issued to Best Medical Inc. The Commission accepted BTL's proposed PDP cost estimate and schedule for funding a Financial Guarantee on March 27, 2015 and directed CNSC staff to revise the Licence Condition Handbook to include BTL's payment schedule, report to the Commission on the progress of the Financial Guarantee funding through Regulatory Oversight Reports, and immediately inform the Commission of any non-conformity with the payment schedule or the Financial Guarantee requirement.

Timelines in the Order

12. In its submission, CNSC staff reported that BTL became in violation of Licence Condition 1.3 on August 1, 2015 for not providing an updated Letter of Credit as per the funding schedule accepted by the Commission. CNSC staff also reported that it repeatedly informed BTL of the necessity of respecting and complying with the funding schedule through written notifications, and that failure to meet the schedule would result in a non-compliance with Licence Condition 1.3.
13. CNSC staff further reported that BTL stated that it did not intend to fulfil Licence Condition 1.3 in the near future due to continued challenges with securing the

necessary funds. BTL did not commit to a date for becoming compliant with Licence Condition 1.3.

14. The Designated Officer considered that failure to establish and maintain a financial guarantee in a form acceptable to the Commission to ensure that sufficient funds are available for the decommissioning by a third party of the BTL facility and the safe disposal of all nuclear substances and prescribed equipment covered under the Class IB licence represented a potential risk to the safe termination of its licensed activities, which in turn represented a potential risk to the environment, the health and safety of persons, and to security. It also represented a potential liability for the Crown to cover costs to safely terminate BTL's licensed activity as a result of BTL's incapacity to do so, or as a result of BTL bankruptcy and/or abandonment.

Actions and Measures of the Order

15. The Order required the licensee to take actions and measures to the satisfaction of the CNSC, including:
- Condition 1: effective immediately, ceasing imports or increases of BTL's possession of sealed sources and prescribed equipment containing radioactive sources or depleted uranium;
 - Condition 2: effective immediately, ceasing operation for the purpose of testing any particle accelerator to an energy greater than or equal to 50 MeV;
 - Condition 3: by September 1, 2015, providing an updated, itemized and accurate inventory of all depleted uranium, sealed sources and prescribed equipment in BTL's possession;
 - Condition 4: by November 1, 2015, disposing of all or transferring all depleted uranium, sealed sources and prescribed equipment in its possession at the BTL facility to a CNSC licensed facility;
 - Condition 5: effective immediately, reporting monthly to the CNSC on the status of the disposal of depleted uranium, sealed sources and prescribed equipment including confirmation from the recipient CNSC licensee that the depleted uranium, sealed sources and prescribed equipment have been received; and
 - Condition 6: by September 1, 2015, providing a revised Preliminary Decommissioning Plan and Financial Guarantee updated to 2015 CAN dollars subject to Commission approval, taking into account the changes to the facility.

BTL requested that the Commission amend Condition 1, Condition 4 and Condition 5 of the Order.

Condition 1

16. BTL requested that Condition 1 be amended to only include imports and increases in inventory of sealed sources, prescribed equipment and depleted uranium intended for divestiture and not include sealed sources, prescribed equipment and depleted uranium

required for operations. BTL stated that it is of the opinion that sealed sources, prescribed equipment and depleted uranium required for operations have no liability associated with future decommissioning because they have an asset value to BTL. CNSC staff stated that it disagrees with BTL's opinion because, although the sealed sources, prescribed equipment and depleted uranium required for operations may be assets to BTL or a trustee, they are not assets to the CNSC and costs will be incurred for their future decommissioning should BTL no longer be operating.

17. BTL also requested that Condition 1 be specific to the 413 March Road facility and be amended to specify that imports of depleted uranium, sealed sources and prescribed equipment to the Nordion (Canada) Ltd. (Nordion) facility at 447 March Road not be impacted. CNSC staff stated that it finds minimal financial risk in accepting this change since sealed sources, prescribed equipment and depleted uranium belonging to BTL stored at the Nordion facility at 447 March Road will continue to be covered by Nordion's Financial Guarantee until BTL fully funds the remainder of its Financial Guarantee, as confirmed by Nordion during its licence renewal hearing held on August 19, 2015.
18. BTL further requested that Condition 1 be amended to allow BTL to submit a request to a DO for authorization to increase its inventory of sealed sources, prescribed equipment and depleted uranium required for operations. CNSC staff stated that this amendment is not necessary, and that BTL is required to provide accurate and verifiable records of inventory for review during inspections to ensure that BTL is complying with the Order.
19. CNSC staff recommended amending Condition 1 of the Order to indicate that all sealed sources, prescribed equipment and depleted uranium at the BTL facility at 413 March Road must be within the value of the Financial Guarantee for their future decommissioning, regardless of their classification as intended for divestiture or required for operations. CNSC staff stated that it expects BTL to define a maximum inventory of sealed sources, prescribed equipment and depleted uranium permitted in the BTL facility at 413 March Road for this purpose wherein the disposal costs associated with these should never exceed the value of the established Financial Guarantee.
20. The Commission enquired about the amount of liability from the possession of sealed sources, prescribed equipment and depleted uranium intended for divestment and sealed sources, prescribed equipment and depleted uranium required for operations. The BTL representative responded that it believes that the amount of liability of sealed sources, prescribed equipment and depleted uranium required for operations is less than that of sealed sources, prescribed equipment and depleted uranium intended for divestment because the former are destined to customers in a relatively short amount of time (approximately 3 weeks). CNSC staff explained that decommissioning plans should consider the scenario where the company is no longer in a position to be in business and where the CNSC must call upon the established Financial Guarantee to manage the decommissioning activities. In this scenario, the CNSC does not have

ownership of any sealed sources, prescribed equipment and depleted uranium and could not profit from their sale. Therefore, CNSC staff cannot consider the value associated with sealed sources, prescribed equipment and depleted uranium required for operations even if they are in BTL's possession for a short amount of time.

21. The Commission agrees with CNSC staff's recommendations and proposed changes to the Order, and amends Condition 1 in the manner described in paragraph 8 above.

Condition 2

22. CNSC staff reported that BTL is complying with Condition 2 of the Order which prohibits BTL from operating for the purpose of testing any particle accelerator to energy greater than or equal to 50 MeV.
23. The Commission confirms Condition 2 of the Order.

Condition 3

24. CNSC staff reported that BTL provided an updated and itemized inventory of sealed sources, prescribed equipment and depleted uranium to CNSC staff on August 26 and 27, 2015 and that CNSC staff is satisfied that BTL has complied with Condition 3 of the Order.
25. The Commission confirms Condition 3 of the Order.

Condition 4

26. BTL requested that Condition 4 be amended by changing the reference "CNSC licensed facility" to "licensed facility" to facilitate disposal or transfer of inventory to an international licensee and to allow BTL to fulfill their obligations under the Order. CNSC staff reported that it finds this request acceptable.
27. BTL also requested that Condition 4 refer specifically to sealed sources, prescribed equipment and depleted uranium intended for divestiture to allow continued operation and support ongoing sales. As discussed in their request for amendment of Condition 1 above, BTL stated that it is of the opinion that sealed sources, prescribed equipment and depleted uranium required for operations have no liability associated with future decommissioning because they have an asset value to BTL. CNSC staff recommended this amendment with the condition that the quantity of sealed sources, prescribed equipment and depleted uranium in the BTL facility located at 413 March Road be limited so that the costs related to their disposal not exceed the value of the established Financial Guarantee regardless of their use. CNSC staff stated it disagrees with BTL's opinion that sealed sources, prescribed equipment and depleted uranium required for operations have an asset value and have no liability associated with future decommissioning.

28. BTL further requested that the deadline of Condition 4 be amended as follows:

- sealed sources and prescribed equipment intended for divestment at 413 March Road be disposed of or transferred to a licensed facility by June 2016
- all depleted uranium intended for divestment at 413 March Road be disposed of or transferred to a licensed facility by October 2016

CNSC staff stated that BTL has not, to date, respected its own timeline nor complied with the condition of its licence for a financial guarantee that is sufficient for the future decommissioning of its facility, and for the sealed sources, prescribed equipment and depleted uranium in its possession.

29. The Commission enquired about BTL's plan for divestiture to reduce the estimated decommissioning costs below the value of the established Financial Guarantee. The BTL representative explained that they cannot meet the deadline of the Order (November 1, 2015) due to challenges in finding recipients and in transferring material to licensed facilities, but that they have developed a plan with a divestiture completion date of October 2016. BTL provided the details of its plan to divest of some of its sealed sources, prescribed equipment and depleted uranium, noting that:

- all sealed sources would be transferred to Nordion for processing and final disposition by June 2016
- 18 of 38 devices (prescribed equipment) would be refurbished by BTL and sold by November 2015
- the remaining 20 of 38 devices (prescribed equipment) would be transferred to Southwest Research Institute (SwRI) in the United States of America by February 2016
- depleted uranium would be exported to Manufacturing Sciences Corporation (MSC) in the United States of America by October 2016.

The BTL representative explained that a contingency was added to its schedule to account for potential delays in contract negotiations and shipments, and to account for the possibility of being required to process depleted uranium prior to shipment. CNSC staff stated that, while oversight during the period of time it takes for BTL to divest itself of their end-of-life materials is feasible, there will be a period of approximately 12 months where BTL's established Financial Guarantee will not be sufficient to cover the amount of liability of all materials at the facility. CNSC staff reported having reviewed BTL's proposed plan for divestment of sealed sources, prescribed equipment and depleted uranium at 413 March Road and found it acceptable.

30. The Commission expressed its dissatisfaction with BTL's performance to date with regards to compliance with Condition 1.3 of its licence. The BTL representative expressed its commitment to meeting the deadlines established in its proposed plan for divestiture of legacy sources.

31. After considering the information presented by BTL and CNSC staff, the Commission accepts BTL's proposed plan for divestiture of sealed sources, prescribed equipment and depleted uranium and amends Condition 4 of the Order in the manner described in paragraph 8 above.

Condition 5

32. BTL requested that Condition 5 be amended by changing the reference "CNSC licensed facility" to "licensed facility" to facilitate disposal or transfer of inventory to an international licensee and to allow BTL to fulfill their obligations under the Order. CNSC staff reported that it finds this request acceptable.
33. The Commission amends Condition 5 of the Order as requested by BTL and recommended by CNSC staff, and in the manner described in paragraph 8 above.

Condition 6

34. CNSC staff reported that, as required by Condition 6 of the Order, BTL submitted a revised PDP on August 24, 2015 that takes into account the changes to the facility that would occur as a result of the Order. CNSC staff assessed and accepted the new PDP that establishes the new cost estimate for decommissioning to be CAD \$1,852,377. CNSC staff noted that BTL remains out of compliance with their licence condition.
35. The Commission enquired about BTL's PDP cost estimate. The BTL representative explained how they developed their PDP based on their inventory along with reasonable cost estimates for decommissioning. The BTL representative stated that they have been unsuccessful in securing funds for the financial guarantee but continue to work with financial institutions. CNSC staff explained that the current PDP cost estimate is \$4,005,963. If BTL complies with the Order and disposes of all or transfers all sealed sources, prescribed equipment and depleted uranium intended for divestment, the PDP cost estimate will become \$1,852,377.
36. The Commission enquired about the new PDP cost estimate of \$1,852,377. The BTL representative responded that the new PDP cost estimate includes material stored at the 413 and 447 March Road facilities required to support BTL's continued operation, and includes licensing costs, personnel and facility costs, contingency and accounts for inflation over 5 years. BTL provided a breakdown of these costs in a supplementary submission on September 21, 2015 (CMD 15-H114.1A).
37. The Commission enquired about material stored at the Nordion facility at 447 March Road. The BTL representative stated that material at the 447 March Road facility is a mixture of legacy sources slated for disposal and new sources required for operations. The BTL representative explained that they included the cost estimate of sealed sources, prescribed equipment and depleted uranium stored at 447 March Road in their revised PDP in order to eventually assume liability once BTL's Financial Guarantee is fully funded. CNSC staff also stated that once BTL's financial guarantee is fully

funded, Nordion will request an amendment to its licence to revise its financial guarantee.

38. The Commission enquired about the estimated disposal cost of sealed sources, prescribed equipment and depleted uranium required for the conduct of business at BTL. CNSC staff responded that BTL provided a summary of all sealed sources, prescribed equipment and depleted uranium that would remain in BTL's possession to support operations at their 413 March Road facility, and determined the associated disposal costs for this material to be \$143,800. CNSC staff reported having reviewed this information and found disposal costs to be reasonable estimates. BTL stated that it estimated the decommissioning cost for 413 March Road assuming some radioactive material is kept as required for continuing business as being \$176,800. BTL noted that this value is fluid and will change depending on work contracted by customers. BTL committed to maintaining a dynamic estimate of the decommissioning cost associated with 413 March Road that matches the changing inventory in real time, with records being auditable by the CNSC.
39. The Commission asked if BTL is still planning on securing funding for the full financial guarantee of CAD \$4,005,963 (2014 dollars) accepted by the Commission during a hearing held on March 25, 2015. The BTL representative reported that they intend to continue with the process of funding the Financial Guarantee in the amount accepted by the Commission on March 27, 2015.
40. The Commission confirms Condition 6 of the Order.

Conclusion

41. The Commission has considered the information and submission of BTL and CNSC staff as presented in the material available for reference on the record for the proceeding.
42. Based on the above information, the Commission agrees with CNSC staff's conclusions that Best Theratronics Ltd. has failed to provide an updated letter of credit in the amount of CAD \$1,175,963 as per the funding schedule approved by the Commission pursuant to Licence Condition 1.3.

43. The Commission confirms Conditions 2, 3 and 6 of the Order. The Commission finds BTL's request to amend Condition 5 of the Order acceptable. The Commission considered BTL's request to amend Conditions 1 and 4 of the Order along with CNSC staff's recommendations. The Commission amends Conditions 1, 4 and 5 of the Order in the manner described in paragraph 8 above.
44. Thus, the Commission, pursuant to subsection 37(6) of the NSCA, confirms Conditions 2, 3 and 6 and amends Conditions 1, 4 and 5 of the Designated Officer Order issued to Best Theratronics Ltd. on August 24, 2015 in the manner described in this *Record of Proceedings*.
45. As part of its confirmation and amendment of the Order, the Commission will proceed to consider any impact that this decision may have on BTL's current licence.



Michael Binder
President,
Canadian Nuclear Safety Commission

SEP 28 2015

Date