



September 24, 2007

File: RS-12978

REGISTERED MAIL

Kathy Bruce, Plant Manager
Toxco Waste Management Ltd.
PO Box 232
Trail BC V1R 4L5

Dear Kathy Bruce:

RE: Approval of Amendment to Operational Plan RS-12978 for Toxco Waste Management Ltd. Hazardous Waste Facility Located at 9384 Hwy 22A, Trail, BC

Toxco Waste Management Ltd. has submitted an amended Operational Plan with request for approval pursuant to Section 4 of the Hazardous Waste Regulation (B.C. Reg. 63/88) of the *Environmental Management Act*. The amended operational plan (revision 3) dated September 12, 2007 was prepared by Toxco Waste Management Ltd. The amendment updates Toxco's July 2006 plan which received the Director's approval on January 19, 2007. I understand that the plan revision concerns inclusion of an additional waste shipping name pertaining to lithium battery components intended for receipt at the Toxco Waste Management Ltd. hazardous facility at Trail, BC. This amendment is intended to reflect proper shipping names compliant with provisions of the *Transportation of Dangerous Goods (TDG) Act* and regulation (federal). The amendment request does not constitute a change or addition to the type of hazardous waste authorized for management at the facility.

Pursuant to the provisions of Section 4(1)(c) of the Hazardous Waste Regulation and subject to the terms and conditions prescribed in this letter, the following plan is **hereby approved**:

- **"Hazardous Waste Regulation Section 4 Operational plan – Toxco Waste Management Ltd." (revision 3) dated September 12, 2007**

Approval of this amended plan authorizes the short term storage of hazardous waste at the location referenced above. Operation of the subject hazardous waste facility is authorized under Operational Plan registration **RS-12978**.

This approval is conditional on the expectation that the operation of the subject hazardous waste storage facility will be conducted in a manner consistent with the commitments described within operational Plan RS-12978.

Note that additional conditions specific to this plan approval are specified below in Section 3.

1. Authorized Storage and Treatment

Type and Quantity of Hazardous Waste to be Managed at Toxco Waste Management Ltd. Facility at 3984 Hwy 22A, Trail, BC

Waste Name (including TDG Class if applicable)	Max. Quantity Stored (kg or L)	Treatment on Site (Y/N)	Recycling on Site (Y/N)	Hazardous Waste Discharged on Site (Y/N)	Maximum Daily Capacity for Treatment, Recycling or Disposal
1) Waste Lithium Batteries and Components [TDG Classes 9 & 4.3]	300,000kg	Y	Y	N	35000kg
(Including but not limited to lithium/sulphur dioxide; lithium/thionyl chloride; lithium (alloy)/iron disulphide; lithium/manganese dioxide; lithium ion batteries.) TDG Shipping Names: Lithium Batteries, Class 9, UN3090, PGII Lithium Batteries Contained in Equipment, Class 9, UN3091, PGII Waste Water-Reactive Solid, NOS (Lithium), Class 4.3, UN2813, PG I					
2) Waste Lithium Metal [TDG Class 4.3]	50,000kg	Y	Y	N	500kg
TDG Shipping Name: Waste Lithium Metal, 4.3, UN1415, PG I					
3) Treatment Residuals (e.g. Carbon Cake) [TDG Class 9]	90,000kg	N	N	N	10000kg
If TCLP analysis demonstrates that residuals are not classified as hazardous, they are not included in the aforementioned quantity. Intermittently, if required, treatment residuals are shipped as a hazardous waste under the following shipping name: TDG Shipping Name: Environmentally Hazardous Substance, Solid N.O.S. (Cadmium, Lead, Mercury), Class 9, UN3077, PGIII					
4) Non-lithium Waste Batteries and Battery Components [TDG Class 8, 8(6.1) & 9]	100 tonnes of each type	N	N	N	N/A
Non-lithium waste batteries are received and stored on-site until an economical quantity is accumulated for shipping or treatment. Non-lithium waste batteries will be shipped to an appropriate disposal/recycling facility. Waste thionyl chloride is stored and sent to an appropriate disposal/recycling facility. (Including but not limited to nickel cadmium, mercury, zinc carbon air, alkaline, nickel metal hydride, lead acid) TDG Shipping Names: Batteries Dry, Containing Potassium Hydroxide, Solid, Class 8, UN3028, PGIII Batteries, Wet, Non-spillable, Electric Storage, Class 8, UN2800, PGIII Batteries, Wet, Filled with Acid, Class 8, UN2794, PGIII Environmentally Hazardous Waste, Solid, N.O.S., Class 9, UN3077, PGIII Batteries, Wet, Filled with Alkali, Class 8, UN2795, PGIII Waste corrosive Liquid, Toxic, N.O.S. (Thionyl Chloride, Lithium Tetrachloroaluminate, Class 8 (6.1), UN 2922, PG I					

Note: Wastes are to be managed and records maintained according to the most specific name applicable (based on TDG).

2. Monitoring

The operational plan (Section 3) includes description of monitoring commitments concerning characterization, management and documentation of hazardous wastes received at the facility and treatment precipitates, products and residuals shipped from the facility. The plan also describes commitments regarding environmental monitoring initiatives, monitoring of facility maintenance aspects and safety inspections.

3. Reporting

Section 4 of the operational plan includes commitments to annual reporting which at minimum will include summary of production and inventory levels, facility inspection records, any modifications to the Recycling Plan, Contingency Plan, and/or Closure Plan, and results of annual Contingency Plan testing. Additionally, an annual emission testing report and an annual facility audit report will be submitted. The annual reports shall be submitted to the Regional Environmental Protection Manager by the end of January of each year. The first report is due January 31, 2008. Ministry file number RS-12978 should be referenced on all correspondence and reports.

Additional reporting requirements assigned by the director as condition of the operational plan approval are as follows:

- All significant non-compliance issues must immediately be reported to the Regional Environmental Protection Manager.
- A copy of an annual external (3rd party) audit report specific to the subject facility operations must be provided to the Regional Environmental Protection Manager on or before January 31st of each year. Further to the commitments made in Section 5 of the operational plan, the audits should confirm consistency of facility operations as compared to commitments set out in the approved operational plan and with respect to any conditions specified by the director.
- In accordance with Section 43(3) of the Hazardous Waste Regulation, any changes to the type and quantity of hazardous wastes managed at the facility must be documented through update reports to your hazardous waste generator registration BCG-02664. These reports are to be provided to the Director using Form 1 of Schedule 5 of the regulation.
- Any demonstration trials and delisting information must be listed in an Appendix A and provided as an attachment to the plan. This appendix shall be maintained up-to-date and provided to the Director within 30 days of changes or additions.

4. Auditing

The operational plan notes that the facility will be audited once per year by an independent qualified professional registered with an appropriate professional organization. Furthermore, the plan commits to undertaking more frequent audits (i.e., every 6 months) in the event that a significant non-compliance issue is identified. The more frequently held audits would be conducted until compliance is confirmed and acknowledged by the Regional Manager. The audits will assess compliance with all aspects of the *Hazardous Waste Regulation* including any changes to the regulation approved under provisions of Section 51. The results of annual facility audit reports shall be submitted to the Regional Environmental Protection Manager by January 31st of each year. The first audit report submission shall be on or before January 31, 2008.

5. Financial Security

Pursuant to Section 17(2) of the *Hazardous Waste Regulation*, financial security for the hazardous waste storage facility has been assessed at \$107,500. This security exceeds the amount of \$60,000 previously required under condition 2.8 of permit PS-12978. The revised amount was determined appropriate based on recent review of facility operation, scale, and waste management/disposal costs. The provision of financial security in a form acceptable to the Director, shall be maintained until approved otherwise. The security amount should be reviewed annually to ensure the assigned value adequately reflects any changes in facility operation, scale or industry imposed waste management/disposal costs.

6. Plan Modifications

Any proposed modifications to the approved plan require the prior review and approval of the Director. Approvals of other plans may also be required under the *Hazardous Waste Regulation* for the facility to be fully authorized to manage hazardous waste. You are reminded that compliance with all applicable terms and conditions of the regulation is required. Contravention of any of the conditions of the regulation is a violation of the *Environmental Management Act* and may result in prosecution.

Sincerely,



Ric W. Baker, P.Eng.
for Director, *Environmental Management Act*

RWB/ES:lkmm

cc: Environment Canada
Regional District of Kootenay Boundary, Trail, BC



October 7, 2011

File: RS-12978

Toxco Waste Management Ltd.
9384 Hwy 22A
PO Box 232
Trail BC V1R 4L5

Attention: Kathy Bruce,
Vice President

Dear Ms. Bruce:

**Re: Receiving Site Registration -Toxco Waste Management Ltd.
Hazardous Recyclable Waste Facility at 9384 Hwy 22A, Trail, BC**

Toxco Waste Management Ltd. has submitted a completed Schedule 5, Form 1 for registration of the subject facility as a receiving site for hazardous waste materials. The registration indicates that the listed hazardous wastes are received at the site for purpose of interim storage, treatment and recycling. The registration was dated August 30, 2011 and is supported by a previously submitted and approved Hazardous Waste Regulation (B.C. Reg. 63/88) Section 4 Operational Plan. This operational plan was last amended on September 24, 2007. The subject plan outlines the types and quantities of hazardous wastes managed at the receiving site as well as the integral aspects of such management inclusive of record keeping, monitoring, reporting and annual external auditing.

The registration of this facility as a hazardous waste receiving site under provisions of Hazardous Waste Regulation (HWR) section 43(2) is acknowledged. The assigned receiving site registration number is **RS-12978**. Note that this registration number was initially created in 2006 via the ministry conversion of Toxco's former hazardous waste storage/treatment permit PS-12978 to a registration. This conversion was associated with de-permitting initiatives and amended provisions of the *Environmental Management Act* and the HWR. These amendments resulted in direct conversion of hazardous waste permits to a registration format. However, receipt of the completed Schedule 5, Form 1 fulfills the formal HWR administrative process/step for registration as a receiving site.

Note that any amendment of information documented in registration RS-12978 must be done via completion of a subsequent notification using the Schedule 5, Form 1. Also, in such circumstance, your approved HWR Section 4 Operational Plan supportive of the registration will require modification and approval by the Director.

...2

The assigned receiving site registration RS-12978 must be noted on all manifests pertaining to the transport/receipt of hazardous waste materials at the subject site. Specifically, this registration number is to be noted as the provincial ID number for the consignee/receiver. This site registration number should also be noted as the reference number on all correspondence concerning this hazardous waste receiving/management facility.

Sincerely,

A handwritten signature in purple ink, reading "Ed Stockerl". The signature is written in a cursive style with a large, stylized "E" and "S".

Ed Stockerl, R.P. Bio.
Environmental Protection/Emergency Response Officer

ES:ar



MAR 17 2005

File: PS-12978

REGISTERED MAIL

Toxco Waste Management Ltd.
Suite 200-999 Farwell Street
Trail BC V1R 3V1

Dear Permittee:

Enclosed is Amended Permit PS-12978 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual fee will be determined according to the Permit Fees Regulation.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the permittee. This permit is issued pursuant to the provisions of the *Environmental Management Act* to ensure compliance with Section 120(3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization. It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

... 2

Administration of this permit will be carried out by staff from the Kootenay and Okanagan Regions. Plans, data and reports pertinent to the permit are to be submitted to the Regional Manager, Environmental Protection, at Ministry of Water, Land and Air Protection, Regional Operations, Kootenay and Okanagan Region, 401-333 Victoria St., Nelson, BC V1L 4K3.

Yours truly,



Carl Johnson, P.Eng.
for Director, *Environmental Management Act*
Kootenay and Okanagan Region

Enclosure

cc: Environment Canada
Toxco Waste Management, Box 232, Trail BC V1R 4L5
ATT: Kathy Bruce, Plant Manager

CJ:lkm



MINISTRY OF WATER, LAND
AND AIR PROTECTION

PS-12978
PERMIT

Under the Provisions of the Environmental Management Act

TOXCO WASTE MANAGEMENT LTD.

SUITE 200-999 FARWELL ST.

TRAIL, BRITISH COLUMBIA

V1R 3V1

is authorized to conduct storage, treatment and recycling of lithium hazardous waste and other specified waste at a treatment facility located at the Columbia Gardens Industrial Park, near Trail, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may result in prosecution.

This permit supersedes and amends all previous versions of Permit **PS-12978**, issued under Part 2 Section 10 of the *Waste Management Act*.

1. AUTHORIZED STORAGE, TREATMENT AND RECYCLING

1.1. Storage

- 1.1.1.** This subsection applies to the storage of lithium hazardous wastes and lithium treatment residuals in the concrete storage bunkers, the battery discharge building, the processing building, the spill containment area, and on the paved area between the buildings and bunkers within the security fence shown on the attached Site Plans A-1, A-2 and B. The site reference number for this storage is E220667.

A handwritten signature in cursive script, reading "Carl Johnson".

Carl Johnson, P.Eng.
For Director, *Environmental Management Act*

- 1.1.2. Lithium hazardous wastes for the purposes of this subsection shall only mean lithium batteries, scrap lithium metal, lithium battery components and MK-50 torpedo boiler units.

Lithium treatment residuals for the purposes of this subsection shall only mean treatment precipitates (lithium salts) and treatment residual scrap (shredded metal, plastic and paper and carbon powder).


- 1.1.3. The location of the lithium hazardous waste storage, treatment and recycling facility is on land legally described as Lot 1, District Lot 205B, Kootenay District, Plan 9710.
- 1.1.4. The maximum quantity of hazardous wastes to be stored at the hazardous waste facility is 253,000 kg.

The maximum quantity of specific hazardous waste to be stored at any one time is as follows:

<u>Hazardous Wastes</u>	<u>Quantity (kg)</u>
Lithium Hazardous Wastes	130,000 ^{(1) (4)}
Partially Processed Lithium Batteries	10,000
Treatment Precipitates ^{(2) (3)}	45,000
Treatment Residual Scrap ^{(2) (3)}	45,000
Total	230,000

Note: 1. The maximum quantity indicated may vary from the number indicated to a maximum of 230,000 kg providing total volume of hazardous wastes on-site does not exceed 253,000 kg. The maximum of 230,000 kg depends on the results of the TCLP analyses as addressed in item 2 below.

2. TCLP analysis of treatment residual sampled during the treatment of lithium/sulphur dioxide type batteries during January 1994 indicated they were not hazardous wastes. Due to the variety of lithium batteries available for treatment, continued TCLP analyses of the above residuals shall be required prior to management by recycling or disposal. The above requirement is also applicable to the MK-50 torpedo boiler units. These treatment residuals shall be managed as hazardous waste until confirmed otherwise.



Carl Johnson, P.Eng.
For Director, Environmental Management Act

Date Issued: June 30, 1994

Date Amended: MAR 17 2005
(most recent)

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MOE-2012-00063

3. If treatment residuals have been shown not to be hazardous wastes, they no longer need to be managed as hazardous wastes, nor are they included in the maximum quantity specified.
4. Up to 100 tonnes of each type of other non-lithium waste batteries (nickel cadmium, mercury, zinc carbon air, alkaline, Nickel Metal Hydride and lead acid) may be received and stored at the Columbia Gardens plant site until an economical quantity has been accumulated for shipping or treatment. The waste batteries must be shipped to an appropriate disposal/recycling facility. These waste batteries may be stored in the discharge building or other short term storage facility as approved in writing by the Regional Manager, Environmental Protection. The quantity of these batteries shall be included in the maximum quantity of hazardous waste as defined in section 1.1.4. and the quantity be reported as per section 3.4.

- 1.1.5. The authorized lithium hazardous waste storage works consists of drums, bulk containers, and structurally reinforced concrete bunkers covered with soil and greening. All drums and containers to be utilized for safe storage and transport of the lithium hazardous wastes must meet *Canadian Transportation of Dangerous Goods (TDG) Regulations* requirements.

Prior authorization from this office must be obtained for additional storage facilities when required. Plans and specifications for such storage facilities must be submitted for approval and construction be carried out in accordance with the approved plans and specifications.

The existing storage bunkers are located at the north side of the facility approximately as shown on the attached Site Plans A-1, A-2 and B.

- 1.1.6. The authorized lithium treatment residuals storage works consists of drums and/or bulk containers, containment area complete with sealed concrete pad, vertical wall berm and roof.

Authorized storage for the dewatered treatment precipitates and treatment residual scrap shall consist of steel drums and/or bulk containers such as tri-wall cardboard boxes, fabric tote bags, or roll-off bins.

All drums and/or containers to be utilized for safe storage/transport of the above materials must meet *Canadian Transportation of Dangerous Goods (TDG) Regulations* requirements.



Carl Johnson, P.Eng.
For Director, *Environmental Management Act*

Containers of dewatered lithium treatment residuals shall be stored inside the covered spill containment area or in the main facility, except that they may be stored under cover of tarps on pallets on the paved area within the security fence for up to 48 hours prior to shipment.

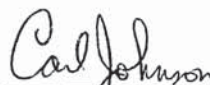
- 1.1.7. Treatment precipitates must be stored separately from the treatment residual scrap.

Lithium treatment residuals resulting from the treatment of the various types of lithium hazardous wastes including the different types of batteries must initially be managed as hazardous wastes and stored separately until otherwise confirmed by results from the respective monitoring program(s) as addressed in Subsection 3.1.1.

- 1.1.8. Containers used for the storage of treatment precipitates (lithium salts) and treatment residual scrap (shredded scrap paper, metal and plastic and carbon powder) shall be clearly labelled to indicate contents and hazards, and when filled to capacity, shall be kept securely sealed or covered except when active access is required.
- 1.1.9. Interim storage of lithium hazardous wastes and partially processed lithium batteries within the treatment building shall be conducted such that access to the wastes by unauthorized personnel is prevented at all times.
- 1.1.10. Interim storage of lithium hazardous wastes within the treatment building shall not exceed one day's processing supply nor extend beyond the end of any scheduled working week and shall be in a secure, confined area dedicated solely to this storage and posted with appropriate warning signs.
- 1.1.11. Interim storage of waste lithium batteries within the battery discharge building shall not extend beyond 7 days of completion of battery discharge
- 1.1.12. The operation and performance of the approved lithium hazardous waste storage facilities shall comply with all the applicable provisions of the *Hazardous Waste Regulation* of the *Environmental Management Act*.

1.2. Treatment

- 1.2.1. This subsection applies to the treatment of lithium hazardous wastes at the facility as shown on the attached Site Plans A-1, A-2 and B.



Carl Johnson, P.Eng.

For Director, *Environmental Management Act*

- 1.2.2. Lithium hazardous wastes for the purposes of this subsection shall only mean lithium batteries, scrap lithium metal, lithium battery components and MK-50 torpedo boiler units.

Lithium treatment residuals for the purposes of this subsection shall only mean treatment precipitates (lithium salts) and treatment residual scrap (shredded metal, plastic and paper and carbon powder).

- 1.2.3. The location of the lithium hazardous waste storage, treatment and recycling facility is on land legally described as Lot 1, District Lot 205B, Kootenay District, Plan 9710.

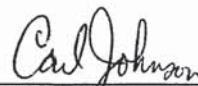
- 1.2.4. The treatment precipitates which form in the reaction tank(s) must be regularly removed from the reaction water tank(s) such that they are kept separate from the treatment residual scrap.

- 1.2.5. The management and characterization of, and record-keeping for treatment residuals shall be kept separate from the management and characterization of, and record-keeping for lithium batteries, scrap lithium metal, lithium battery components, and lithium boiler units.

Treatment residuals from the treatment of lithium batteries and/or lithium boiler units may be co-mingled if they have been shown not to be hazardous wastes.

- 1.2.6. The works authorized for the treatment of lithium batteries, scrap lithium metal, lithium battery components and partially processed lithium batteries are argon/nitrogen cooling/stabilization tanks, lathe, hydraulic press, hammermill system(s), hydraulic shear system, conveyors, shear shredders, reaction water tanks and related appurtenances, interim/reserve tank(s), treatment precipitates filtering system(s) and pollution control works. The pollution control works consist of ducts, Whirl-wet scrubber, Harrington vertical packed bed scrubber and explosion proof discharge fan, stack and related appurtenances authorized under Permit PA-12975.

- i) The process equipment shall only be operated when the ventilation system and the associated pollution control works are fully operational.
- ii) Shredded lithium battery components, scrap lithium metal and lithium battery components shall not be treated by immersion into the reaction water tank unless the protective vent shroud is in place over the reaction tank and the hydrogen gas detection device and the shroud venting system and associated pollution control works are fully operational.



Carl Johnson, P.Eng.

For Director, *Environmental Management Act*


1.2.7. The works conditionally authorized for the treatment of MK-50 torpedo boiler units are: argon/nitrogen cooling chamber(s), hydraulic shearing booth and related appurtenances, reaction water tank(s) and related appurtenances, interim/reserve tank, and pollution control works. Details of the design must be submitted to the Regional Manager, Environmental Protection, for written approval prior to installation and operation.

- i) The lithium boiler unit treatment works shall not be operated unless the pollution control works and associated appurtenances are fully operational.
- ii) Sheared lithium boiler unit pieces shall not be treated by immersion into the reaction water tank unless the protective vent shroud is in place over the reaction tank and the hydrogen gas detection device and the shroud venting system and associated pollution control works are fully operational.
- iii) The removal or oxidation of sulphides in the water filled reaction tank dedicated to the treatment of lithium boiler units shall be completed prior to initiating any sparging efforts including the use of carbon dioxide.

1.2.8. Authorized treatment of lithium hazardous waste, partially processed lithium batteries, and associated reaction by-products shall occur in the equipment as shown in Site Plans A-1, A-2 and B.

1.2.9. The pH of water in the lithium waste reaction tanks shall be continuously monitored and maintained above pH 8.0 during treatment operations.

The permittee shall incorporate as part of standard facility operating protocol, a directive to operate/maintain water in the lithium hazardous waste reaction tank(s) within an optimal pH range of 11.0 and 13.0 during treatment operations.



Carl Johnson, P.Eng.

For Director, *Environmental Management Act*

PERMIT: PS-12978

1.2.10. Authorization to treat lithium hazardous wastes other than those indicated in Subsection 1.2.2 and specifically lithium batteries or components other than the lithium/sulphur dioxide, lithium/thionyl chloride, lithium/manganese dioxide, lithium/iodine, lithium/vanadium oxide, lithium/carbon monofluoride, lithium sulphuryl chloride, lithium/cobalt oxide, lithium ion, and lithium polymer and lithium (alloy)/iron disulphide type shall be issued only upon completion of the following requirements:

- i) Submission to the Regional Manager, Environmental Protection, of a report documenting information on the lithium hazardous waste chemical constituents, the reactions in air and in the alkaline solution (including those with the other battery types components) and the reaction products and by-products resulting from the above treatment process.

The Regional Manager, Environmental Protection, may require emissions and treatment residuals monitoring and characterization from the "new" lithium hazardous waste subsequent to review of the above mentioned report(s).

- ii) Details of the proposed monitoring program specific to the type of lithium hazardous waste or lithium battery type must be submitted to the Regional Manager, Environmental Protection, for written approval if requested.

1.2.11. This permit does not authorize the discharge of any effluent resulting from the operation of this facility.

1.2.12. The operation and performance of the approved lithium hazardous waste treatment facilities shall comply with all the applicable provisions of the *Hazardous Waste Regulation* of the *Environmental Management Act*.

1.3. Recycling

1.3.1. The permittee shall incorporate recycling as an integral part of the daily operations from the approved lithium hazardous waste storage, treatment and recycling facility.

Recycling shall be the preferred method and the first option to be considered for the management of the following treatment residuals from the lithium hazardous waste storage, treatment and recycling facility:

- i) Treatment precipitates (lithium salts);
- ii) treatment residual scrap (shredded metal, plastic and paper and carbon powder); and
- iii) clean metal, plastic and rubber gaskets.

- 1.3.2. Other miscellaneous wastes consisting of barrels, pallets, inert packing materials etc. received on-site with the lithium hazardous wastes shall be managed through reuse if safe to do so.
- 1.3.3. Prior to disposal of any waste(s) not addressed in the most current and approved recycling plan, the permittee shall provide the Regional Manager, Environmental Protection, written notification at least 14 days in advance of the proposed disposal.

2. GENERAL REQUIREMENTS

2.1. Maintenance of Works

The permittee shall inspect the authorized works regularly and maintain them in good working order. Notify the Regional Manager, Environmental Protection, of any malfunction of these works.

2.2. Effluent Disposal

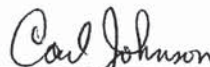
Disposal of any treatment effluents inclusive of water from waste lithium treatment tank(s), if required, shall be pursued through the services of a qualified waste management company.

2.3. Emergency Procedures

In the event of an emergency which prevents compliance with a requirement of this permit, that requirement shall be suspended for such time as the emergency continues or until otherwise directed by the Director provided that:

- (a) Due diligence was exercised in relation to the process, operation or event which caused the emergency and that the emergency occurred notwithstanding this exercise of due diligence;
- (b) The Regional Manager, Environmental Protection, is immediately notified of the emergency; and
- (c) It can be demonstrated that every thing possible is being done to restore compliance in the shortest possible time.

Notwithstanding (a), (b) and (c) above, the Director may require the operation to be suspended or production levels to be reduced to protect the environment while the situation is corrected.



Carl Johnson, P.Eng.
For Director, *Environmental Management Act*

2.4. Process Modifications

The Regional Manager, Environmental Protection, shall be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge.

2.5. Plans

Plans and specifications of the works authorized shall be submitted to the Regional Manager, Environmental Protection, and approval obtained before any construction and/or modification commences. The works shall be constructed in accordance with such plans.

2.6. Prevention of Fire, Explosion and Accidental Reactions

The design, operation and performance of the lithium hazardous waste storage, treatment and recycling facility shall be such that fires, explosions and accidental reactions are prevented and comply with all provisions of Section 9 of the *Hazardous Waste Regulation* of the *Environmental Management Act*.

2.7. Access for Inspection

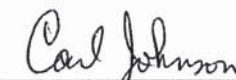
Sufficient aisle space/access must be provided in all areas of waste storage to allow safe visual inspection of facilities and waste inventory. All containers must be sealed when not in use and be clearly labeled to indicate contents, volume and hazards.

2.8. Posting of Security

The permittee shall post and maintain financial security with the Minister of Finance in the amount of \$60,000 prior to May 1, 1998.

2.9. Other Provisions

The operation and performance of the approved hazardous waste storage, treatment and recycling facility must comply with all the applicable provisions of the *Hazardous Waste Regulation* of the *Environmental Management Act*.



3. MONITORING AND REPORTING REQUIREMENTS

Lithium hazardous wastes for the purposes of this section shall only mean lithium batteries, scrap lithium metal, lithium battery components and MK-50 torpedo boiler units.

Lithium treatment residuals for the purposes of this section shall only mean treatment precipitates (lithium salts) and treatment residual scrap (shredded metal, plastic and paper and carbon powder).

The following monitoring and reporting program shall be performed by the permittee.

3.1. Treatment Residual Characterization

- 3.1.1. The permittee shall undertake a monitoring program to provide a qualitative and quantitative description of the physical and chemical properties of the lithium treatment residuals resulting from the treatment of lithium hazardous wastes.

The monitoring program shall include:

- i) A description of the proposed sampling locations, techniques, equipment, frequency and quality assurance.
- ii) Sufficient information to characterize the chemical properties/hazards of the water in the reaction water tank(s) in such event that disposal is required.
- iii) Analysis of lithium treatment residual samples for the following parameters:

pH
TCLP Analysis for Metals and
Fluorides*

- * Fluoride testing on residuals resulting from treatment of lithium boiler units and lithium/iron disulphide batteries.

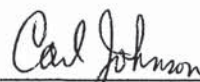
- 3.1.2. The permittee shall document all general process aspects relative to the treatment of the MK-50 torpedo boiler units, including treatment water neutralization data and the average quantity of all treatment precipitates and treatment residual scrap produced per treated boiler unit.
- 3.1.3. The permittee shall document all general process aspects relative to the treatment of lithium hazardous wastes and partially processed lithium batteries inclusive of the dates and volumes treated, precipitate removal, and the average quantity of all treatment precipitates and treatment residual scrap produced per unit weight of the above lithium waste types.
- 3.1.4. The permittee shall monitor and record pH of water within the lithium hazardous waste reaction tank(s) before and after each treatment batch.

3.2. General Monitoring

- 3.2.1. Containers used to store treatment precipitates shall be clearly marked with the name of the material and any associated hazards. Records of inventories of treatment precipitates and residuals must be maintained and made available for inspection for a minimum of 2 years.
- 3.2.2. Waste records shall be maintained documenting all aspects of treatment precipitates and treatment residual scrap production inclusive but not limited to production rates, storage inventory, and date(s) of production and shipment.
- 3.2.3. Records shall be maintained for all lithium hazardous wastes stored and treated on-site inclusive of receipt dates, MK-50 boiler unit serial numbers and weights, dates of treatment, and copies of the certificates of destruction. The permittee also shall maintain waste records as required by Part 3, Section 6 of the *Hazardous Waste Regulation of Environmental Management Act*.

3.3. Analyses

- 3.3.1. As authorized under the *Environmental Data Quality Assurance Regulation of the Environmental Management Act*, the permittee shall ensure that their analytical laboratory is registered under the Inter-Laboratory Comparison Program described in the *Regulation*.
- 3.3.2. Analyses are to be carried out in accordance with procedures described in the "British Columbia Laboratory Methods Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples (2003 Permittee Edition)", or the most recent edition, or by suitable alternative procedures as authorized by the Director.



Carl Johnson, P.Eng.
For Director, *Environmental Management Act*

A copy of the above manual may be purchased from the Queen's Printer Publication Centre, P.O. Box 9452, Stn. Prov. Govt, Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or (250) 387-6409). A copy of the manual is also available for inspection at all Environmental Protection offices.

3.4. Reporting Requirements

- 3.4.1. The recycling plan shall address recycling for treatment residuals and miscellaneous wastes addressed in Subsection 1.3.1 and 1.3.2 respectively.

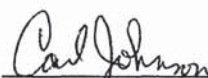
The recycling plan shall be updated annually and submitted with the annual report described in Subsection 3.4.2. Any changes to the plan must be submitted to the Regional Manager, Environmental Protection, for approval prior to their adoption.

- 3.4.2. The permittee shall submit an annual report to the Regional Manager, Environmental Protection, documenting the quantity of lithium hazardous wastes received and treated at the facility, the volumes of treatment residuals and miscellaneous wastes generated and the respective management methods utilized during each calendar year.

The annual report shall be submitted on or before February 14th following the applicable calendar year.

- 3.4.3. The permittee shall submit details of the proposed treatment residuals monitoring program as described in Subsection 3.1.1. to the Regional Manager, Environmental Protection, for approval on or before July 31, 1994.

- 3.4.4. The permittee shall submit the results of the lithium treatment residuals and reaction tank water characterization analysis to the Regional Manager, Environmental Protection, within 30 days of receipt. Records summarizing the quantity of lithium hazardous wastes received on-site, the current storage inventory, the quantity treated and the lithium treatment residuals inventory must be submitted to the Regional Manager, Environmental Protection, on a quarterly basis commencing October 1, 1994.



Carl Johnson, P.Eng.
For Director, *Environmental Management Act*

[illegible]

CASTLEGAR

TRAIL

FRUITVALE

ROSSLAND

CANADA

U.S.A.

23A

LOCATION OF TREATMENT FACILITY

UPPER LEVEL

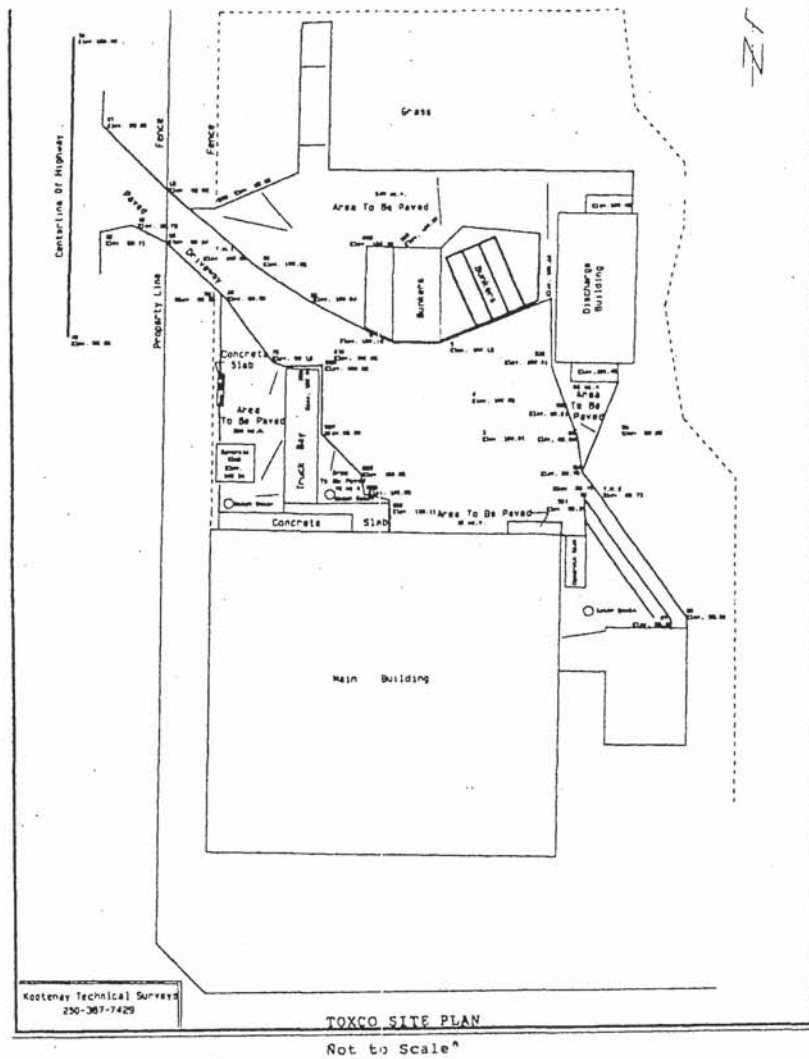
1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10

1' 0" 10' 0" 10' 0" 10' 0" 10' 0" 10' 0" 10' 0" 10' 0" 10' 0" 10' 0"

A hand-drawn map showing the location of the treatment facility. The map is divided into two regions by a dashed line: CANADA (top) and U.S.A. (bottom). A road runs from the top, through TRAIL, and then splits. One branch goes to FRUITVALE, and the other goes south through ROSSLAND. A vertical road labeled 22A branches off the southbound road. A small square symbol on road 22A is labeled 'LOCATION OF TREATMENT FACILITY' with an arrow pointing to it.

Site Plan B



LEGAL DESCRIPTION: Lot 1, District Lot 205B, Kootenay District, Plan 9710

Permit: PS-12978

Date Issued: June 30, 1994

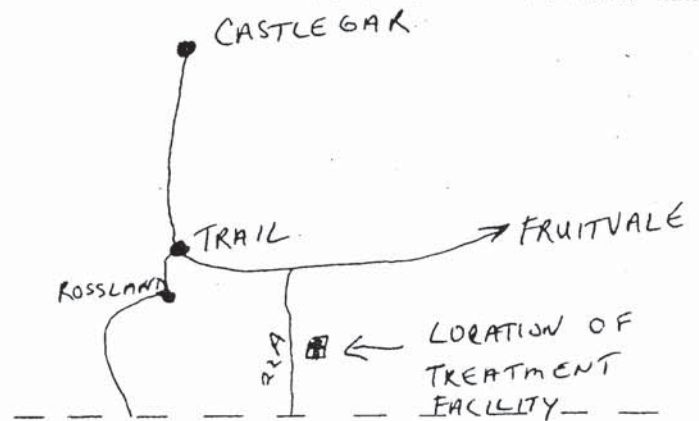
Date Amended: MAR 17 2005
(most recent)

For Director, Environmental Management Act:

Carl Johnson
Carl Johnson, P.Eng.

Name of Applicant: Toxco Waste Management Ltd.

LOCATION MAP



September 12, 2007

Ministry of Environment
Environmental Protection
Kootenay and Okanagan Regions
401-333 Victoria Street
Nelson, BC V1L 4K3

Attention: Ed Stockerl

Dear Ed,

Enclosed please find Revision 3 of Toxco's Operational Plan as required under the Environmental Management Act. This Operational Plan will replace Revision 2.

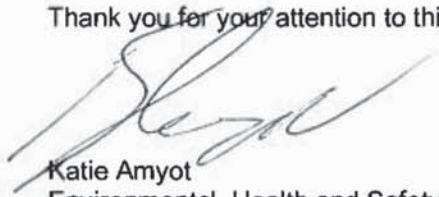
The only change to the Operational Plan is on page 3. Toxco would like to request that an additional shipping name be added to our Operational Plan. The following shipping name has been suggested by Generators to most accurately describe two types of battery debris that we would like to receive at our Trail, BC plant:

1) Waste Water-Reactive, Solid, NOS (Lithium Nickel), Class 4.3, UN2813, PG I

This waste will consist of destructive testing of lithium batteries which have been exposed to either temperature and/or pressure under controlled conditions in a laboratory or breached batteries or exposed battery parts.

Toxco is fully capable of recycling both wastes in our existing system.

Thank you for your attention to this matter,



Katie Amyot
Environmental, Health and Safety Manager

HAZARDOUS WASTE REGULATION

SECTION 4 OPERATIONAL PLAN

TOXCO WASTE MANAGEMENT LTD.

9384 Highway 22A
Box 232,
Trail, B.C.,
V1R 4L5

Facility Contact: Kathy Bruce,
Plant Manager
Phone: (250) 367-9882
Toll Free: (877) 468-6926
Fax : (250) 367-9875
E-mail: toxco.kat@xplornet.com

Landowner: Toxco Waste Management Ltd.
9384 Highway 22A
Box 232, Trail, B.C., V1R 4L5

Legal Description: Lot 1, District Lot 205B, Kootenay District, Plan 9710

PID#: 013-034-626

Latitude: 49° 02' 27"

Longitude: 117° 36' 14.8"

Ministry reference numbers: RS-12978
PA-12975 Air emissions permit, site reference # E220667

BC Generator I.D.: BCG-02664

Date Prepared: July 2006

Revision Number: 3

Revision Date: September 12, 2007


Kathy Bruce, Plant Manager

1.0 Background

Toxco Waste Management Ltd. (Toxco) operates a lithium hazardous waste storage and treatment facility near Trail, B.C. Canada. The facility has been operating since September 1993 under the requirements of temporary approvals from the start of operations until Permit PS-12978 for the storage, treatment, and recycling of lithium special wastes, and Permit PA-12975 for the discharge of contaminants to the atmosphere were issued on June 30, 1994 and July 6, 1994 respectively.

Toxco is authorized to operate a lithium waste storage and treatment facility, and has expanded into the storage and treatment of other types of battery systems for the purpose of recycling valuable components. Toxco is committed to operating according to all applicable federal, provincial and municipal requirements and guidelines such as:

- Transportation of Dangerous Goods Act (TDG);
- BC Environmental Management Act (EMA); and,
- Canadian Environmental Protection Act (CEPA).

This operational plan supersedes PS-12978, issued under the BC Waste Management Act, authorizing the storage and treatment of lithium wastes. The Environmental Management Act (EMA), brought into force on July 8, 2004 replaces the Waste Management Act and the Environment Management Act. Under the EMA, an operational plan is required to be submitted to the Ministry of Environment as permits such as PS-12978 will no longer be issued.

2.0 Type and Quantity of Hazardous Waste

The following table lists the types and maximum quantities of hazardous waste that Toxco is authorized to store, treat, and/or discharge. Appendix A contains dates of ministry approvals for the demonstration trials and, if applicable, the dates of delisting approvals.

Waste Name (including TDG Class if applicable)	Max. Quantity Stored (kg or L)	Treatment on Site (Y/N)	Recycling on Site (Y/N)	Hazardous Waste Discharged on Site (Y/N)	Maximum Daily Capacity for Treatment, Recycling or Disposal
1) Waste Lithium Batteries and Components [TDG Classes 9]	300,000kg	Y	Y	N	35000kg
(Including but not limited to lithium/sulphur dioxide; lithium/thionyl chloride; lithium (alloy)/iron disulphide; lithium/manganese dioxide; lithium ion batteries.) TDG Shipping Names: Lithium Batteries, Class 9, UN3090, PGII Lithium Batteries Contained in Equipment, Class 9, UN3091, PGII Waste Water-Reactive, Solid, NOS (Lithium Nickel), Class 4.3, UN2813, PG I					
2) Waste Lithium Metal [TDG Class 4.3]	50,000kg	Y	Y	N	500kg
TDG Shipping Name: Waste Lithium Metal, 4.3, UN1415, PGI					
3) Treatment Residuals (e.g. Carbon Cake) [TDG Class 9]	90,000kg	N	N	N	10000kg
If TCLP analysis demonstrates that residuals are not classified as hazardous, they are not included in the aforementioned quantity. Intermittently, if required, treatment residuals are shipped as a hazardous waste under the following shipping name: TDG Shipping Name: Environmentally Hazardous Substance, Solid N.O.S. (Cadmium, Lead, Mercury), Class 9, UN3077, PGIII					
4) Non-lithium Waste Batteries and Battery Components [TDG Class 8, 8(6.1) & 9]	100 tonnes of each type	N	N	N	N/A
Non-lithium waste batteries are received and stored on-site until an economical quantity is accumulated for shipping or treatment. Non-lithium waste batteries will be shipped to an appropriate disposal/recycling facility. Waste thionyl chloride is stored and sent to an appropriate disposal/recycling facility. (Including but not limited to nickel cadmium, mercury, zinc carbon air, alkaline, nickel metal hydride, lead acid) TDG Shipping Names: Batteries Dry, Containing Potassium Hydroxide, Solid, Class 8, UN3028, PGIII Batteries, Wet, Non-spillable, Electric Storage, Class 8, UN2800, PGIII, Corrosive Batteries, Wet, Filled with Acid, Class 8, UN2794, PGIII, Corrosive Environmentally Hazardous Waste, Solid, N.O.S., Class 9, UN3077, PGIII Batteries, Wet, Filled with Alkali, Class 8, UN2795, PGIII, Corrosive Waste corrosive, Liquid, Toxic, N.O.S. (Thionyl Chloride, Lithium Tetrachloroaluminate, Class 8 (6.1), UN 2922, PGI					

3.0 Monitoring

Toxco monitors its activities for compliance with all applicable federal, provincial, and municipal laws and guidelines. The main instrument for monitoring compliance is an electronic and hardcopy documentation system designed to meet the needs of federal and provincial reporting requirements and client quality systems.

3.1 Incoming waste characterization monitoring

Toxco monitors all wastes received and produced on-site using an electronic and hardcopy documentation system designed to meet the requirements of the Environmental Management Act (EMA) and Hazardous Waste Regulation (HWR). The management, characterization of, and record-keeping for incoming hazardous wastes and out-going treatment residuals are kept separate to ensure quality control.

3.1.1 Lithium Wastes

Lithium waste characterization, its transportation to the Toxco site, and its storage and handling on-site is monitored using the following documents and on-site initiatives:

3.1.1 (a) Lithium Waste Profile Sheets

All generators are required to complete and submit a Lithium Waste Profile Sheet for approval prior to shipping any materials. This profile includes identification of the particular chemistry of the batteries to be shipped. Analytical, dimensional and structural information may be requested following review of the profile. A sample may be requested for prescreening. Each waste is evaluated as per TDG and HWR requirements and correctly classified as dangerous goods or hazardous waste. Each profile is assigned an approval number which is cross-referenced to the client file. A copy of the profile is kept in perpetuity.

3.1.1 (b) Waste Manifests

Toxco is permitted by Environment Canada to import lithium containing wastes, including lithium metal, lithium batteries, and equipment containing lithium wastes. Each manifest (International, US and/or Canadian) relating to a specific shipment is kept with copies of all other relevant documentation for that shipment in separate files. Signed-off copies are returned to the generator, transporter(s), and appropriate regulators.

3.1.1 (c) Certificate of Acceptance

Certificates of Acceptance are issued to each generator upon receipt and acceptance of lithium wastes at the facility.

3.1.1 (d) Certificate of Recycling

Certificates of Recycling are issued upon final treatment, neutralization and/or detoxification of the lithium wastes.

3.1.1 (e) *Process Records*

Records of selected process, operating conditions, material receipt, and movement, are maintained to assist in process control and improvement, and to ensure that the operation and performance of the hazardous waste storage facilities comply with all applicable federal, provincial and municipal requirements.

3.2 **Treatment Precipitates and Residuals Characterization and Disposal**

Toxco's outputs include:

- Recycled products (lithium carbonate, cobalt cake, copper-cobalt product);
- Salt brine;
- Treatment residuals (carbon cake); and,
- Non-hazardous treatment residual scrap (metal, plastic, paper).

Recycling is the preferred method for the management of salt brine, carbon cake and non-hazardous treatment residual scrap (shredded metal, plastic and paper and carbon powder), however, recycling is limited by available technology and to those options which do not significantly reduce or eliminate the profitability of the business.

Recyclable materials are accumulated on-site until truckload quantities are on-hand. An updated Recycling Plan will be submitted in 2006 which outlines Toxco's recycling commitments. The Recycling Plan will be revised when significant changes are made to the operational processes that impact recycling of waste materials as described in the Plan, or as new, economically feasible, opportunities/ technologies become available allowing additional recycling initiatives. Changes to the Plan will be documented and reported to the MOE in Toxco's Annual Report.

The following subsections describe monitoring processes to characterize and ensure proper disposal or recycling of Toxco outputs.

3.2 (a) *Recycled Products*

Recycled products for resale are stored separately from incoming wastes and treatment residuals to avoid contamination of the purified product. Recycled products sold by Toxco include:

- Lithium carbonate
- Cobalt filter cake
- Copper cobalt product
- Cathode scrap

Recycled products are not considered hazardous wastes.

3.2 (b) *Salt Brine*

A clarified salt brine solution is produced while manufacturing lithium carbonate. The clarified salt brine is disposed of by trucking to Alberta for deep well injection into a salt cavern or, if this option becomes unavailable, will be disposed of in accordance with all applicable federal, provincial and municipal requirements. Sufficient information to characterize the chemical properties and hazards of the salt brine in the reaction water tanks will be maintained on-site in the event that alternate disposal is required.

3.2 (c) *Carbon Cake Residual*

TCLP analysis of carbon cake in January 1994 indicated that the waste was not hazardous. However, due to the variety of lithium batteries available for treatment, the carbon cake is treated as hazardous waste until confirmed otherwise by TCLP analysis. In addition, carbon cake TCLP analysis may be performed when processing a previously unprocessed type of battery, or if chemical parameters are identified in the Waste Profile Sheets which are known to affect the qualities of the carbon cake. Testing parameters will vary according to the chemical parameters of the batteries inputted to the process. At a minimum, carbon cake is tested for pH and TCLP metals. If identified as a hazardous waste, carbon cake is disposed of in accordance with all applicable federal, provincial and municipal requirements.

3.2 (d) *Non-hazardous Treatment Residuals (Metal, Plastic, Paper)*

Metal treatment residuals are tested for pH and, if found to be caustic, are treated on-site prior to disposal. Non-caustic metal treatment residuals are not considered hazardous wastes, and are not included in the maximum allowable quantity stored identified in Section 2.0. Mixed plastic residuals are disposed of according to all federal, provincial and municipal regulations.

3.3 **Additional Environmental Monitoring**

The following subsections describe additional monitoring initiatives undertaken by Toxco to ensure environmental compliance.

3.3 (a) *Effluent emissions monitoring*

The Toxco facility does not discharge liquid effluents from its operation into the environment, storm sewers or municipal or industrial treatment works.

3.3 (b) *Air emissions monitoring*

Emissions monitoring is conducted annually by an independent third party environmental firm. Stack emissions are sampled as required in PA-12975 during the treatment of lithium hazardous waste treated at the facility. Additional monitoring of emissions is conducted on an as-needed basis when process conditions warrant.

3.3 (c) *Weekly Environment and Safety Inspections*

A weekly environment and safety inspection is made of the facility. The records of these inspections are used to ensure that deficiencies identified are corrected in a timely manner.

3.3 (d) *Maintenance*

A checklist identifies weekly, monthly, quarterly, semi-annual and annual maintenance tasks. Maintenance activity records are maintained on-site. Maintenance required on a daily basis is performed according to Toxco written procedures.

3.3 (e) *Laboratory and Sampling Quality Assurance*

As authorized under the Environmental Data Quality Assurance Regulation of the Environmental Management Act, Toxco will ensure that the analytical laboratory chosen to perform analyses of samples collected at the Toxco facility is registered under the Inter-Laboratory Comparison Program described in the Regulation.

Analyses of samples will be carried out in accordance with procedures described in the "British Columbia Laboratory Methods Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples (2003 Permittee Edition)" or most recent edition, or by suitable alternative procedures.

4.0 Reporting

All records relevant to the EMA and HWR, including waste characterization, transport, and operations, will be maintained on-site for a period of no less than two years. These records will be available for inspection by MOE staff.

Toxco will submit an Annual Operations Summary Report, beginning one year from the date of submission of this operations plan, which, at a minimum, will include:

- Monthly production volumes and inventory levels;
- A summary of facility inspection records such as those described in sections 3.3 (c) and (d).
- Any modifications made to the Recycling Plan, Contingency Plan, and/or Closure Plan.
- Results of annual Contingency Plan testing.

Toxco will also submit an Air Emissions Testing Summary Report and an Annual Audit report (as described in Section 5.0) prepared by qualified environmental professionals. A cover letter will be submitted outlining plans to resolve non-compliant issues.

The following table contains a list of records kept on-site and annual reporting commitments.

Record/Report Type	Copies Maintained On-site (Years)	Frequency of submission to MOE	Information included
Waste Profile Sheets	Perpetuity	N/A – Available on-site for inspection	<ul style="list-style-type: none"> • Identification of particular chemistry of the batteries to be shipped.
Waste Manifests	Perpetuity	N/A – Available on-site for inspection	<ul style="list-style-type: none"> • As per international/federal/provincial requirements
Certificate of Acceptance	Perpetuity	N/A – Available on-site for inspection	<ul style="list-style-type: none"> • Confirms receipt and acceptance of lithium wastes
Certificates of Recycling	Perpetuity	N/A – Available on-site for inspection	<ul style="list-style-type: none"> • Confirmation of treatment/neutralization and/or detoxification
Process records	3	N/A Available on-site for inspection	<ul style="list-style-type: none"> • Production volumes and inventory levels
Weekly Environmental/Safety Inspections	3	N/A – Available on-site for inspection	<ul style="list-style-type: none"> • Facility inspection record
Maintenance	3	N/A – Available on-site for inspection	<ul style="list-style-type: none"> • Weekly, monthly, quarterly, semi-annual and annual maintenance tasks.
Air Emissions	Perpetuity	Annual	<ul style="list-style-type: none"> • Air emissions testing summary report prepared by independent qualified professional
Audit	Perpetuity	Annual	<ul style="list-style-type: none"> • Cover letter outlining plans to resolve non-compliant issues • Audit report prepared by independent qualified professional
Annual Summary Report	Perpetuity	Annual	<ul style="list-style-type: none"> • Summary report containing at a minimum: <ol style="list-style-type: none"> a) Production volumes and inventory levels b) Facility inspection record c) Modifications to Recycling Plan, Contingency Plan, Closure Plan

5.0 Auditing

An audit to review compliance of the facility and documentation system with all applicable aspects of the Environmental Management Act and the Hazardous Waste Regulation (HWR) will be conducted annually for two years from the date of submission of this operations plan (Jan 2007). If a track record of compliance is achieved, and if supported by the Director, the frequency of audits will be reduced to a rate agreed to by both parties (MOE and Toxco). If a significant non-compliance issue is found, as determined by the Director, an audit will then be conducted every six months until compliance is achieved.

All audits will be conducted by a qualified professional registered with an appropriate professional organization. Audit reports will include a summary of non-compliance issues and an outline of the professional qualifications of the auditor. Audit reports will be submitted to the MOE by regular mail and will be accompanied by cover letter outlining Toxco's plans for resolving any non-compliant issues.

The audit report will be signed by the auditor with the following statement "Standard auditing principles were followed and the audit represents a true compliance assessment of the facility in terms of the Hazardous Waste Regulation." The audit report will be submitted to the MOE within 30 days of its receipt by Toxco.

Appendix A

Hazardous Waste Treatment and Delisting Approvals

<i>Specific Name of Hazardous Waste Treated (include TDG class if applicable)</i>	<i>Demo Trial Approval Date & Report Date (note Sec. 18(2&4))</i>	<i>Delisting Protocol Approval Date (note Sec. 53)</i>
<i>Lithium Hazardous Wastes (TDG Class 9)</i>	<i>September 1993 – June 1994</i>	<i>N/A</i>

2.0 Type and Quantity of Hazardous Waste

The following table lists the types and maximum quantities of hazardous waste that Toxco is authorized to store, treat, and/or discharge. Appendix A contains dates of ministry approvals for the demonstration trials and, if applicable, the dates of delisting approvals.

Waste Name (including TDG Class if applicable)	Max. Quantity Stored (kg or L)	Treatment on Site (Y/N)	Recycling on Site (Y/N)	Hazardous Waste Discharged on Site (Y/N)	Maximum Daily Capacity for Treatment, Recycling or Disposal
1) <i>Waste Lithium Batteries and Components</i> [TDG Classes 9]	300,000kg	Y	Y	N	35000kg
(Including but not limited to lithium/sulphur dioxide; lithium/thionyl chloride; lithium (alloy)/iron disulphide; lithium/manganese dioxide; lithium ion batteries.) TDG Shipping Names: Lithium Batteries, Class 9, UN3090, PGI Lithium Batteries Contained in Equipment, Class 9, UN3091, PGI Waste Water-Reactive, Solid, NOS (Lithium), Class 4.3, UN2813, PG I					
2) <i>Waste Lithium Metal</i> [TDG Class 4.3]	50,000kg	Y	Y	N	500kg
TDG Shipping Name: Waste Lithium Metal, 4.3, UN1415, PGI					
3) <i>Treatment Residuals (e.g. Carbon Cake)</i> [TDG Class 9]	90,000kg	N	N	N	10000kg
If TCLP analysis demonstrates that residuals are not classified as hazardous, they are not included in the aforementioned quantity. Intermittently, if required, treatment residuals are shipped as a hazardous waste under the following shipping name: TDG Shipping Name: Environmentally Hazardous Substance, Solid N.O.S. (Cadmium, Lead, Mercury), Class 9, UN3077, PGIII					
4) <i>Non-lithium Waste Batteries and Battery Components</i> [TDG Class 8, 8(6.1) & 9]	100 tonnes of each type	N	N	N	N/A
Non-lithium waste batteries are received and stored on-site until an economical quantity is accumulated for shipping or treatment. Non lithium waste batteries will be shipped to an appropriate disposal/recycling facility. Waste thionyl chloride is stored and sent to an appropriate disposal/recycling facility. (Including but not limited to nickel cadmium, mercury, zinc carbon air, alkaline, nickel metal hydride, lead acid) TDG Shipping Names: Batteries Dry, Containing Potassium Hydroxide, Solid, Class 8, UN3028, PGIII Batteries, Wet, Non-spillable, Electric Storage, Class 8, UN2800, PGIII Batteries, Wet, Filled with Acid, Class 8, UN2794, PGIII Environmentally Hazardous Waste, Solid, N.O.S., Class 9, UN3077, PGIII Batteries, Wet, Filled with Alkali, Class 8, UN2795, PGIII Waste corrosive, Liquid, Toxic, N.O.S. (Thionyl Chloride, Lithium Tetrachloroaluminate), Class 8 (6.1), UN 2922, PGI					

SCHEDULE 5

FORM 1 (S. 43)

Registration Form

RECEIVED

SEP 02 2011

MINISTRY OF ENVIRONMENT

THIS FORM IS A REGISTRATION REPORT MADE UNDER
SECTION 43 (1) OR (3) OF THE HAZARDOUS WASTE REGULATION

Reason for Submittal:

- ☐ To provide an Initial Registration Report
- ☒ To provide Subsequent Notification of changes to a registration report for

Registration No. / Provincial ID Dated

OR

Registered Site (RS) No. RS-12978 Dated 15 November 2006

If this is Subsequent Notification, please indicate what changes are being reported

- ☐ Facility Name Change ☐ Mailing Address Change ☐ Management Company Change
- ☐ Adding a Waste Type ☐ Removing a Waste Type
- ☐ Changing Quantity of Previously Registered Waste(s)
- ☒ Other Describe Updating existing receiving site registration.

Instructions

- (1) A person required to register under section 43 (1) or to give notice under section 43 (3) must complete this form.
- (2) Identification numbers are site specific: complete a separate form for each hazardous waste site.
- (3) All persons must complete parts A and D. Complete part B for facilities that generate hazardous waste. Complete part C for management facilities. Some generator facilities may also be management facilities, and in that case, parts A, B, C and D must be completed. **Note: a generator that temporarily stores hazardous waste before shipping it to a management facility is not considered to be a management facility.**
- (4) Send original Form 1 to: Regional Manager, Environmental Protection at the applicable regional office. Retain a copy for your records.
- (5) Please print or type the required information on the form.

Definition:

Physical State: L=Liquid; S=Solid; G=Gas; SL=sludge.

Waste Identification: Name of Waste: (a) TDG Regulations classified Hazardous Wastes - enter UN Number, TDG Class and waste name in accordance with TDG Regulations, (b) hazardous wastes not regulated by TDGR: enter "N/A" for UN Number and TDG Class, use defined hazardous waste name.

Produced/30-day period: Estimate of amount produced.

Storage/Capacity: Maximum storage or capacity of the facility (under the regulation for each type of waste)

Units: Use metric, litres or kilograms (L or kg).

Handling codes: 01 storage; 02 thermal treatment; 03 chemical treatment;
04 physical treatment; 05 biological treatment; 06 secure landfill;
07 recycled; 08 solidification;

09 other, please specify

10 land farming; 11 off site management.

A. FACILITY INFORMATION

- (1) Registered corporate name (as filed with the Registrar of Companies in British Columbia).

Registered Name: Toxco Waste Management LTD.

Trade Name: Toxco

Corporate Number issued by Registrar of Companies: 135907616

If the generator/facility owner is a partnership or proprietorship provide the full name of the principal(s):

- (2) Corporate address (Full postal mailing address)

Street Address: 9384 Highway 22A, P.O. Box 232

City: Trail

Prov: BC

Postal Code: V1R 4L5

- (3) Primary contact information at mailing address (Print Name, Telephone, Fax and email address)

Name: Kathy Bruce

Telephone: 250.367.9882 ext 110

Fax: 250.367.9875

Email: kbruce@toxco.com

- (4) Facility/site physical address, PO Box is not acceptable.

Street Address: 9384 Highway 22A

City: Trail

Prov: BC

Postal Code: V1R 4L5

- (5) If no physical address can be provided for the site, complete the location coordinates below.

Latitude: Deg. Min. Sec.

Longitude: Deg. Min. Sec.

- (6) Standard Industrial Classification (SIC): 4953 Recycling waste materials

Note: The SIC system was developed to provide a method to define and classify establishments according to their primary activity. Please provide the SIC code that best describes the activities of this facility/site.

- (7) Are there any discharges from the facility? ☒ Yes ☐ No

If, yes, indicate the nature of the discharge:

☒ Air Emission

☐ Effluent

☒ Residue (Solids, Sludge, etc.)

Describe the discharge:

Air emissions sec PA-12975

- (8) If there are effluent discharges (as indicated above), indicate the receiving site: Not applicable.

Municipal Sewer

☐ Yes

☒ No

Storm Sewer/Environment

☐ Yes

☒ No

B. HAZARDOUS WASTE GENERATOR:

Note: A generator ordinarily generates and stores hazardous waste onsite and ships the hazardous waste to a management or disposal facility. However, some generator facilities may also be management facilities. If a generator facility is also a management facility, the generator must also complete Part C.

(1) Generator type (Sawmill, Restaurant, Petroleum Refinery, Residence, etc.)

(2) Source / process generating the Hazardous Waste (e.g. maintenance shop)

(3) List the name, address and License to Transport number of the principal intended hazardous waste carrier(s)/ transporter(s) for each waste type; attach a separate sheet if necessary

(4) List the name and address of the principal intended receiver(s)/consignee(s) where you intend to ship the hazardous wastes generated for each waste type; attach a separate sheet if necessary

(5) Complete the following table:

Physical State	Waste Identification			Quantity		Unit (L kg)	Handling Code
	Name of Waste	TDG UN #	TDG Class	Produced/ 30-day period	In Storage		
a)							
b)							
c)							
d)							
e)							

(6) Is the mode of generation ongoing, intermittent or one-time only?

Ongoing ☐

Intermittent ☐

One-time only ☐

C. HAZARDOUS WASTE MANAGEMENT FACILITY:

(1) Check the appropriate box below:

Onsite Management Facility ☐ Receiver of Hazardous Waste ☒

Return Collection Facility (for household hazardous wastes) ☐

(2) Type of activity (Check all that apply)

Store ☒ Treat ☒ Recycle ☒ Dispose ☐

(3) Complete the following table: Please see the attached Table 1.

Physical State	Waste Identification			Quantity	Unit (L kg)	Handling Code
	Name of Waste	TDG UN #	TDG Class	Storage Capacity		
a)						
b)						
c)						
d)						
e)						

D. CERTIFICATION:

(1) I certify that the information provided on this form is correct and complete.

Toxco Waste Management Ltd.

PRINT COMPANY NAME IF APPLICABLE

KATHY BRUCE

PRINT NAME

2503679882 x10
TELEPHONE NUMBER

250 367 9875
FAX NUMBER

Kathy Bruce
SIGNATURE

30 Aug 2011
DATE (DD/MM/YY)

- (2) If you are acting as an agent of the owner of the waste, please provide the information requested below and generator confirmation that you are acting on their behalf.

PRINT COMPANY NAME IF APPLICABLE

TELEPHONE NUMBER

FAX NUMBER

SIGNATURE

DATE (DD/MM/YY)

GENERATOR/MANAGEMENT FACILITY AUTHORIZATION OF AGENT ARRANGEMENT:

PRINT NAME

SIGNATURE

FOR MINISTRY USE ONLY:

DATE: INITIALS:

Registration No. / Provincial ID No.

Registered Site (RS) #.....

Print Form

Reset Form

Table 1 – Summary of Wastes Treated, Stored, or Recycled

Ref	Waste name	Maximum storage	Onsite treatment	Onsite recycling	Maximum daily capacity
1	Lithium batteries and components	300,000 kg	yes	yes	35,000 kg
2	Alkaline batteries	100,000 kg*	no	no	n/a
3	Lead-acid batteries	100,000 kg*	no	no	n/a
4	Lithium metal	50,000 kg	yes	yes	500 kg
5	Recyclable scrap metal**	100,000 kg	no	yes	500 kg
6	Carbon cake residual***	90,000 kg	no	no	10,000 kg

Notes:

* 100,000 kg of each type. For example, 100,000 kg of NiMH, 100,000 kg of NiCd, etc. Non-lithium batteries are received and stored onsite, segregated by compatible chemistry, for shipping to an appropriate facility or for treatment.

** Includes scrap metal received as non-regulated bulk scrap and as hazardous recyclable material.

*** Generated from the neutralization of lithium chemistry with sodium carbonate; may exhibit a hazardous waste characteristic, subjected to periodic representative sampling under the waste analysis plan; 90,000 kg storage limit only applies to carbon cake that is determined to be hazardous waste due to the presence of a regulated metal above applicable TCLP threshold.