

STANDARD PROCEDURE INSTRUCTION

Title		SPI
Handling of Hazardous Lamps		35-5
Department	Supersedes SPI Dated	Effective Date
Safety, Health and Environment	New	June 5, 2012

Handling of Hazardous Lamps

PURPOSE

To ensure the segregation and recycling of hazardous bulbs in a manner that allows efficient reclamation of process metals.

SCOPE

The type of bulbs or lamps that these procedures apply to:

- Fluorescent tubes
- Compact Fluorescent bulbs
- Halogen Lamps
- Mercury Vapour Bulbs
- High Intensity Discharge
- High Pressure Sodium Lamps
- Incandescent Bulbs

These procedures apply to:

2.1 Manitoba Operations / Electrical / Maintenance Departments - (responsible for segregating refuse as described in Section 6).

2.2 Manitoba Operations Shops and Transportation Department - (responsible for supervising the pickup and drop off of storage bins as described in Section 3).

2.3 Manitoba Operations – which may regularly or occasionally deliver material directly to the various storage bin locations (responsible for directing any generally stored bulbs to appropriate locations within each department as per Section 3).

PICK-UP AND DELIVERY OF STORAGE BINS

3.1 Pick-up of Full Storage Bins

3.1.1 Each Plant / Mine will have a designated storage and pick-up location within the area for storage of the hazardous bulbs. The area will be marked with a green sign with white lettering as per SPI 34-41 Colour Coding for Warning Signs and Lights.

3.1.2 The storage barrels will be used only to store the bulbs and lamps. No refuse is to be put in the barrels.

3.1.3 The storage barrels will be picked up by the Transportation

Department. Pick-ups will be made when arranged with the Transportation Department, Mondays through Fridays.

3.2 Empty Bins

3.2.1 Empty Bins will be delivered from the centralized storage location when a full bin is picked-up from the Plant / Mine. Additional empty bins will be stored at the Centralized Storage Location.

3.2.2 Empty Bins will be ordered through K-Light Recycling on an as necessary basis by the Environment Department.

3.3 Centralized Storage Location

Between pick up and drop off of the storage bins from the Plant or Mine and pick-up and drop off at the rented space at the contracted yard, a centralized storage location is designated in the South Yard.

4. RESPONSIBILITIES

4.1 Environment Department will be responsible for the following:

4.1.1 Work in conjunction with the Operating & Maintenance Departments to maintain this policy and ensure it is current.

4.1.2 Work in conjunction with the Operating management to establish a safe procedure for recycling hazardous lamps and bulbs.

4.1.3 Assist in maintaining appropriate records of removal and of recycled materials and ensure reporting and ordering additional empty bins as required.

4.2 Operating and Maintenance Departments will be responsible for the following:

4.2.1 Ensure all employees doing related work are trained in the health hazards related to hazardous bulbs. Ensure that all employees, supervisors, planners and inspectors engaged in related work have appropriate training and qualifications.

4.2.2 Facilities that do not have a direct maintenance system; will have their hazardous bulbs managed by Central Maintenance & Utilities.

4.3 Safety will be responsible for the following:

4.3.1 Assist Operating and Maintenance Departments in ensuring that correct procedures are being followed.

4.4 The Environment Department / Waste Management Department will be responsible for the following:

- 4.4.1 Develop and update as required the training packages. Training packages will be located with the documentation in section 4.1.3. The training packages are accessible from the Training Department's website.
- 4.4.2 Ensure that contractors involved in related work are aware of and follow all Provincial regulations and guidelines and Vale's guidelines.
- 4.4.3 Ensure that the Contractor provides MSDSs of all products to be approved prior to delivery on site.

4.5 Transportation will be responsible for the following:

- 4.5.1 The transportation of full storage bins from the Plant / Mine designated location to the Central Storage Location and transportation of the bins to the centralized storage location to the rented space at the contracted yard.
- 4.5.2 The transportation of empty storage bins to and from the Plant / Mine designated location, the centralized storage location on plant site and to the rented space at the contracted yard.

5. SEGREGATION OF REFINERY REFUSE

5.1 Blue Plastic Storage Bins

Blue bins labeled "MVB" are for the storage of Mercury Vapour bulbs specifically due to the hazards of the bulbs. Due to high inventory levels, there will be a separate labeled bin for Mercury Vapour Bulbs.

Regular, unlabeled, blue bins are for the storage of the other bulbs that will fit within the bin without breaking.

Large, long or abnormally shaped bulbs are not to be forced into bins. Bulbs of this nature are to be placed beside the bin and Transportation is to be notified of additional pick-up requirements.

5.2 Cylindrical Canvas Storage Bins

These bins are to be treated as regular, unlabeled, blue bins. Mercury Vapour Bulbs are under no circumstances to be placed in this type of storage bin.

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Date

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Date