

National Steel Pellet Company

Draft Voluntary Mercury Reduction Agreement

1.0 Introduction

National Steel Pellet Company (NSPC) supports the Minnesota Mercury Contamination Reduction Initiative and with this report, will submit our plans and goals of mercury reduction to the Minnesota Pollution Control Agency (MPCA). As new information becomes available, this document and its contents will be modified to fit changing circumstances, if needed. Upon successful completion of this agreement, NSPC hopes to decrease our mercury uses by a considerable amount. Precise reduction amounts are not available at this time, but will be estimated/calculated in the near future. Further study is needed to achieve accurate values. At this time, a major facility inventory is in progress to determine the amount of mercury onsite and how it is used. After this study, NSPC will be in a better position to estimate/calculate reduction amounts.

1.1 Facility Description

National Steel Pellet Company is a taconite mining and processing facility located on the Mesabi Iron Range one mile north of Keewatin, Minnesota. NSPC is a wholly owned subsidiary of National Steel Corporation of Mishawaka, Indiana. Creating iron ore pellets from low-grade taconite requires a lengthy process of mining, crushing, separating, concentrating, and pelletizing. Once the pellets are formed, they are shipped to our customers in Illinois and Michigan.

2.0 Previous and Ongoing Mercury Reduction Activities of NSPC

NSPC continues to actively investigate mercury reduction opportunities. Listed below are previous activities that were conducted to provide information on mercury levels.

- ◆ A mercury mass balance was conducted at NSPC during August of 1999.
- ◆ NSPC has a mercury waste-recycling program currently in place. Mercury containing batteries, switches, lab wastes, fluorescent bulbs, and other mercury-containing devices are being recycled at a licensed recycling facility.
- ◆ NSPC in 1999 made changes in the chemical lab procedures and no longer uses mercuric acid for any lab assay work.

3.0 Mercury Emission Reductions from Product Use Changes

- ◆ NSPC has, and will continue, to take an active roll in recycling mercury. During the period from 1994 to 1999 NSPC has sent to recyclers approximately 9,877 pounds of mercury containing lamps. In addition during 1999, NSPC set up a recycling program and sent for recycling approximately 4.25 pounds of mercury containing devices such as thermometers, switches, and batteries.
- ◆ NSPC has in 2000 removed mercury from two (out of service) Merrick scales on site. The mercury removed from the two scales and a scale maintenance kit resulted in approximately 50 pounds of bulk mercury removed. NSPC plans to replace the remaining two Merrick scales with non-mercury containing Ramsey scales.

4.0 Proposed Voluntary Agreement Activities

NSPC will work on the following activities as part of the voluntary mercury reduction agreement. In addition NSPC will also continue to evaluate other options.

4.1 Product Related Activities

- ◆ Conduct an inventory of mercury containing products. NSPC will use this information in developing a program to phase out or replace mercury-containing products. Once the inventory is complete the products will be categorized by their associated risk, which will take into account the likelihood of a mercury release from such products. A determination will then be made on whether to phase out a specific item. The specific timing for phasing out a particular device will be based on the availability of mercury free alternatives, the risk of release and the cost.

Progress Indicators: Success of this portion of the program will be identified by the completion of the product inventory.

- ◆ NSPC will label mercury-containing devices, where feasible. NSPC will develop a process for labeling devices that contain mercury; this will promote proper handling and disposal of the devices.

Progress Indicators: Success of this portion of the program will be identified by the completion of the labeling of the mercury containing products.

- ◆ NSPC will communicate with employees the proper use and management of mercury containing products. This will be accomplished through annual environmental awareness training. NSPC will also provide mercury containing product information, to its (approximately) 550 employees, on

facilities that manage mercury wastes. NSPC will do this by providing dates, times and locations for existing programs to its employees.

- ◆ NSPC, along with the Iron Mining Associations (IMA), is currently evaluating several potential community mercury programs. The IMA has been having meetings with Western Lake Superior Sanitary District (WLSSD) and the local counties to identify additional needs or gaps in the existing community programs. The group is also examining the needs that schools, hospitals, and nursing homes may have in dealing with mercury issues. Once the analysis is complete and a decision is made, NSPC will update this agreement.

4.2 Research Related Activities

The following are three research projects that NSPC is co-sponsoring along with the Department of Natural Resources, Hibbing Taconite Company, US Steel Mintac, Eveleth Taconite, Ispat Inland Taconite and North Shore Taconite.

4.2.1 Preparation of Certified Mercury Standards from Taconite

The result of this project will be the preparation of three taconite standards certified for total mercury. The accuracy of mercury balances performed at Minnesota taconite facilities is dependent on the accuracy of mercury analysis obtained from contract analytical laboratories. There currently are no Minnesota taconite ores that are certified for total mercury.

4.2.2. Mercury Removal from Induration Off Gas by Wet Scrubbers

The amount of mercury removed by the wet scrubbers will be quantified. An investigation will be performed to determine if mercury-removal efficiency is related to scrubber water chemistry and or the dust chemistry.

4.2.3. Mercury Volatilization Associated with Taconite Tailings

The estimation of mercury volatilization to the atmosphere from taconite tailings, tailings ponds, coarse and fine tailings, and tailings that have been amended to promote plant growth. The quantification will be at a screening level, rather than a determination of exact rates.

5.0 Schedule of Voluntary Agreement Development and Implementation

Throughout the life of this agreement the program will very likely undergo changes. NSPC plans on submitting progress reports annually to report on agreement activities and any modifications to the agreement. NSPC will conduct an annual review and produce a report to be submitted to the MPCA on or about April 30. The following is an approximate timeline for the implementation of the above agreement program components.

Program Component	Implementation Date
Mercury Removal From Scales	December 31, 2001
Inventory Mercury Containing Devices	September 30, 2000
Identify Risk of Devices	December 31, 2000
Device Phase Out Determinations	June 30, 2001
Label Mercury Containing Devices	August 30, 2001
Employee Training (Annual)	November 30, 2000
Research Activities	December 31, 2001
Progress Report	April 30, 2001