



State of Oregon

Department of Environmental Quality

Memorandum

BENEFICIAL USE OF SOLID WASTE RESPONSE TO PUBLIC COMMENTS

To: **File** **Date:** November 1, 2011

From: Bill Mason, WR Hydrogeologist
Audrey O'Brien, Manager, Northwest Region Solid Waste

Subject: Beneficial Use Determination
Columbia Steel Tier 2 proposed beneficial use of spent steel slag as nonresidential construction fill

INTRODUCTION

The Oregon Department of Environmental Quality's Solid Waste program promotes the prevention, recovery and proper management of solid waste. DEQ's regulatory actions are not intended to influence land use decisions by local government.

In April 2010, the Environmental Quality Commission adopted rules establishing new procedures for DEQ to approve the beneficial use of solid waste. Beneficial use may involve using an industrial waste in a manufacturing process to make another product or using waste as a substitute for construction materials. Beneficial use of solid waste is a more sustainable alternative to disposal that conserves energy, reduces the need to extract natural resources and reduces demand for disposal facilities.

On December 8, 2010, DEQ received a Tier 2 beneficial use application from Columbia Steel Casting Company to sell spent steel slag for beneficial use as nonresidential construction fill. DEQ proposes to approve the requested beneficial use. In making its determination, DEQ reviewed analytical data for the spent steel slag to ensure contaminant concentrations are below levels of concern for people and wildlife based on the proposed future use of the material.

PUBLIC INVOLVEMENT

On September 28, 2011 DEQ initiated a public comment period on the beneficial use determination and held an information meeting on October 18, 2011 at the St. John's Community Center. The meeting started at 6:30 pm and ended at approximately 7:30 pm. The comment period closed at 5 p.m. on Friday, October 28, 2011. DEQ received one request for information and comments from the Oregon Department of Transportation during the public comment period. DEQ has summarized and responded to the comments received below.



RESPONSE TO COMMENTS

Comment #1:

DEQ received the following comments from Jennie Armstrong of the Oregon Department of Environmental Quality.

ODOT asked if the material will be dry screened or wet screened? If dry screened, dust will still adhere to the material. DEQ may want to consider requiring wet screening of the material or in lieu of wet screening, which would cost more and generate a hard-to-manage sludge, DEQ may want to consider requiring dust control during installation of this material using a mist/spray over the installation area.

ODOT also noted that the first condition of the approval states that Columbia Steel must make sure that the material contains contaminants below occupational screening levels. This condition should be changed, because manganese and arsenic currently exceed occupational levels, and so the material fails this condition as is.

ODOT notes that fresh slag is very different than weathered slag. Although the current material is weathered, ODOT suggests that the fresh material should be tested to see if it differs from weathered and whether it also meets occupational screening levels.

DEQ's response:

DEQ is requiring that Columbia Steel Casting Company screen material on site so the materials sold do not contain fine dust. Screening on site is Columbia Steel's responsibility and should be done in accordance with Oregon's OSHA requirements. DEQ recommends that Columbia Steel follow safe practices to protect their workers. DEQ recognizes that some fine dust may still adhere to the materials to be sold, but considers the amount of fine dust to be minimal and that screening will remove most of the dust of concern. While DEQ would advise buyers to take safety precautions to protect workers from all dust during installation of the fill material, DEQ does not see a need to require buyers to apply mist or spray the material during installation.

DEQ has reviewed the first condition of the approval letter and agrees that for manganese, the condition does not apply. The condition does apply for arsenic which has been tested at or below background concentrations. DEQ is clarifying the language as follows:

1. **Except for manganese, the steel slag must not contain concentrations of hazardous substances above DEQ approved human health occupational risk-based screening levels or naturally occurring background, whichever is higher. To address concerns about manganese concentrations, Columbia Steel must ensure that the steel slag to be sold meets conditions #2 through #9.**

DEQ agrees that fresh slag may have potential to leach more contaminants or allow for runoff of contaminants. DEQ considers the conditions to require covering and keeping the material out of water to be sufficiently protective to address any potential leaching or runoff of fresh slag.

Request for information:

DEQ received one request from Paul Seer of the Portsmouth Neighborhood Association requesting information about contaminants are in steel slag and DEQ's limits for those contaminants. DEQ provided that information and has not received additional comments from Mr. Seer.