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Regulation of Operations that Handle either PIF (post-incineration ferrous) or Muni-ferrous (pre-incineration ferrous)

Bureau of Waste Prevention

A handwritten signature in black ink, appearing to read "James C. Colman", written over a horizontal line.

James C. Colman, Assistant Commissioner

12/12/2004

Date

Purpose: The purpose of this policy is to document the Department of Environmental Protection's determination regarding the applicability of current solid waste site assignment regulations, 310 CMR 16.00 and solid waste facility permitting regulations, 310 CMR 19.00 to off-site operations that handle either "PIF" (post-incineration ferrous) or "muni-ferrous" (pre-incineration ferrous). These operations are subject to the Determination of Need (DON) process in accordance with 310 CMR 16.05(6)&(7).

This policy supercedes previous Department determinations regarding the applicability of solid waste regulations to PIF and muni-ferrous operations.

The Department uses policy/guidance/decision documents as a means to clarify, document and record regulatory interpretations and/or for documenting resolutions of issues that are of special interest to the regulated community. Policies may also be used by the Department to provide more information on a topic than is expressly stated in regulation.

This document is intended solely as guidance for the handling of PIF and/or muni-ferrous. This guidance does not constitute final agency action, and is not "regulations" as that term is used in M.G.L. c. 30A. This policy may not be relied upon to create rights, duties, obligations or defenses, implied or otherwise, enforceable at law or in equity, by any person in litigation with DEP. It does not create any substantive or procedural rights, and is not enforceable by any party in any administrative proceeding with the Commonwealth. Regulated sources continue to have responsibility for being in full compliance with all applicable regulatory requirements.

Applicability: This policy applies to any operation that handles either PIF or muni-ferrous outside the limits of a solid waste management facility permitted in accordance with 310 CMR 19.000, the “Solid Waste Management Facilities Regulations”. The term “handling” means any activity that stores, transfers, processes or treats PIF or muni-ferrous including, but not limited to, shredding, sorting or baling activities.

Background: A typical activity at some solid waste management facilities (SWMF) is to remove metals from the municipal solid waste (MSW) for recycling prior to disposal of the MSW. This is generally done by passing a magnet over the municipal solid waste to capture ferrous metals and/or using some other separation technology for recovering non-ferrous metals. As a result of this separation process, a material stream is produced that contains both metal (cans, etc.) and residues. Typically MSW is the unwanted residue that is inadvertently captured along with the metal during the separation process. This combination of metal and MSW is generally referred to as “muni-ferrous”.

At the end of the combustion process at municipal waste combustors (MWC), a similar type of metal recovery operation may occur. Again, a magnet and/or some other separation technology for recovering non-ferrous metals, is used to recover the metals from the municipal waste combustor’s (MWC) ash for recycling. At the end of this process, some MWC ash residual remains commingled with the metals. This material is generally referred to as post-incineration (or post-combustion) ferrous, or “PIF”.

Both of these materials (PIF and muni-ferrous), separated from solid waste, are generally sent from the SWMF to metal shredding or baling operations off the site of generation. Metal shredding operations further process these materials by removing the residuals (MSW or MWC ash) from the metals and reducing the size of the recovered metal. Metal shredding operations typically use some combination of physical and mechanical methods to separate the MWC ash or MSW from the metal. Often this separation is accomplished using hand picking, magnets, air separators, trommels or other types of screening equipment. In addition, shredding equipment is often used to reduce the size of the recovered metals prior to transfer to a recovery facility. At baling operations, PIF or muni-ferrous is consolidated by means of compacting equipment into a smaller volume to facilitate the transportation of the material. The metals from both of these activities are then typically shipped to a foundry or similar type of metal recovery/manufacturing facility for recycling. Sometimes, an unwanted consequence of these separation/shredding/baling activities has been the creation of nuisance conditions such as dust, odor, noise or litter.

Solid Waste Regulation Applicability Determination: Operations that handle PIF and/or muni-ferrous as described above are determined by DEP to be a type of recycling operation for the handling of pre-sorted recyclable materials provided the applicant demonstrates such through the Determination of Need for Site Assignment (DON) process (16.05(6)& (7)), to the Department’s satisfaction. PIF or muni-ferrous handling operations that cannot demonstrate to the Department’s satisfaction that they are engaged in a recycling activity will be determined to be solid waste handling facilities that require a site assignment under 310 CMR 16.00 and a solid waste facility permit in accordance with 310 CMR 19.000.

Because the generation of residues (the amount of non-recyclable material) for operations that handle PIF or muni-ferrous may often exceed 15%, the conditional exemption for recycling operations at 16.05(3)(d) does not apply. However, the Determination of Need (DON) process allows for a case-by-case determination of alternative residue generation rates based on an industry average using the best available processing equipment for the type of material being recycled. In the case of metal shredding operations that process PIF or muni-ferrous, the Department has determined, as a result of information provided to the Department during the policy development process and an evaluation of the PIF and/or muni-ferrous recycling process, that the appropriate industry standard for residuals contained in these material streams is often greater than 15%. In addition, the Department has determined that the residue generation rate is not a static number and needs to be determined on a site-by-site basis as it is largely dependent on the source of the material. Also, because the metal recovery rate is not static and because industry methods are changing, and potentially improving, it is reasonable to have the recovery rate reevaluated on a recurring basis to determine if the best available recovery is occurring. Therefore, the Department will allow operations that handle PIF or muni-ferrous, such as metal shredders and balers, to apply for a DON to demonstrate that best available metal recovery is occurring so that they may be determined to be recycling operations and not solid waste facilities.

PIF or muni-ferrous activities or operations that cannot be approved through the DON process, because they are not DON eligible, or for some other reason choose not to apply for a DON, may apply for a solid waste site assignment (310 CMR 16.00) and solid waste facility permit (310 CMR 19.000) for any activities involving handling PIF or muni-ferrous.

When applying for DONs, PIF or muni-ferrous operations shall address all the requirements specified in the regulations at 16.05(6) & (7). Specifically, the application shall comprehensively address the performance criteria at 16.05(7)(d) 5.d.i. and 16.05(7)(d) 8. by demonstrating how any adverse impacts associated with handling PIF or muni-ferrous, including but not limited to, dust, odor, noise, vectors, litter, and stormwater, will be controlled.

The controls appropriate for the handling operation will depend on the type of activities employed at that location. For example, the need to control fugitive dust emissions will be required at all operations, but it is anticipated that the type of controls will be different, and probably more extensive, for a shredding operation than for a baling operation because of the greater potential to create dust.

Examples of control technologies that may be applicable to operations handling PIF or muni-ferrous are provided in Table I. Please note that these are given as examples only; other methods not listed may be considered provided that they adequately control the environmental issue of concern.

Table I

PIF – MUNI - Examples of Operational Controls

Operation	Receipt	Front–end storage	Trommelling	Shredding	Shredded metal storage	Recovered ash or MSW storage	Contact Stormwater or dust control water	Non contact stormwater
PIF	Receive wet/damp or otherwise use water spray to prevent dust.	Enclosed ¹ area. Covered when not operational.	Dust controls – keep moist; use continuous water spray, etc. Or enclosed ¹ area	Enclosed ¹ – noise and dust control	Controlled storage area.	Enclosed ¹ area. Covered when not operational	Sewer connection permit, tight tank, groundwater discharge permit, or individual NPDES stormwater permit	General NPDES permit
Muni	Enclosed ¹ area. Control vectors, odors, litter	Enclosed ¹ area. Control vectors, odors, litter	Enclosed ¹ area. Control vectors, odors, litter	Enclosed ¹ – noise and dust control	Controlled storage area.	Enclosed ¹ area. Covered when not operational	Sewer connection permit, tight tank, groundwater discharge permit or individual NPDES permit	General NPDES permit

¹ The Degree of enclosure to be determined by site-specific considerations such as location, materials handled, equipment operation and other types of environmental control