

Summary of Proposed Solid Waste Definition Rule (Identification of Non-Hazardous Secondary Materials that are Solid Waste)

EPA is not proposing to list specific non-hazardous secondary materials as either wastes or non-wastes in regulatory language, but is rather specifying the criteria to be used to determine if these secondary materials are or are not solid wastes.

Statutory Authority

The U.S. Environmental Protection Agency (EPA) is promulgating these regulations under the authority of sections 2002(a)(1) and 1004(27) of the Resource Conservation and Recovery Act (RCRA), as amended, 42 USC 6912(a)(1) and 6903(27). Section 129(a)(1)(D) of the CAA directs EPA to establish standards for Commercial and Industrial Solid Waste Incinerators (CISWI), which burn solid waste (section 129(g)(6) of the Clean Air Act (CAA), 42 USC 7429). Section 129(g)(6) provides that the term, solid waste, is to be established by EPA under RCRA. Section 2002(a)(1) of RCRA authorizes the Agency to promulgate regulations as are necessary to carry out its functions under the Act. The statutory definition of “solid waste” is provided in RCRA section 1004(27).

Categories of Materials Evaluated

Non-hazardous secondary material (NHSM) fuels or fuel groups: the biomass group (pulp and paper residuals, forest derived biomass, agricultural residues, food scraps, animal manure, and gaseous fuels); construction and demolition materials (building related, disaster debris, and land clearing debris); scrap tires; scrap plastics; spent solvents; coal refuse; waste water treatment sludge, used oil; auto shredder residue, purification process byproducts, and resinated wood products.

NHSM ingredients: blast furnace slag; cement kiln dust (CKD); the coal combustion product group (fly ash, bottom ash, and boiler slag); foundry sand; silica fume; and secondary glass material.

Traditional Fuels

Traditional fuels are those fuels that have been historically managed as valuable fuel products rather than being managed as waste materials. Traditional fuels include fossil fuels (e.g., coal, oil, including used oil meeting on-specification levels, natural gas) and their derivatives (e.g., petroleum coke, bituminous coke, coal tar oil, refinery gas, synthetic fuel, heavy recycle, asphalts, blast furnace gas, recovered gaseous butane, and coke oven gas). Clean cellulosic biomass materials are also traditional fuels rather than wastes when burned as a fuel.

“Clean” material is defined as those NHSMs that have not been altered (either chemically or through some type of production process), such that it contains contaminants at concentrations normally associated with virgin biomass materials. Clean cellulosic biomass includes forest-derived biomass (e.g., green wood, forest thinnings, clean and unadulterated bark, sawdust, trim, and tree harvesting residuals from logging and sawmill materials), corn stover and other biomass crops used specifically for energy production (e.g., energy cane, other fast growing grasses), bagasse and other crop residues (e.g., peanut shells), wood collected from forest fire clearance activities, trees and clean wood found in disaster debris, and clean biomass from land clearing operations. (underline added).

Proposed Approach to Identifying What Secondary Materials are Solid Waste

Under the proposed rule, the following are not solid wastes when combusted for purposes of the CAA:

- NHSMs used as fuels that remain within and are combusted within the control of the generator and that meet the legitimacy criteria;
- NHSMs that meet the legitimacy criteria and are used as ingredients in a manufacturing process;
- materials that meet the legitimacy criteria and have been sufficiently processed into a fuel or ingredient from discarded NHSMs; and
- NHSMs used as a fuel that does not remain within the control of the generator for which EPA grants a facility's petition for a "non-solid waste" determination.

NHSMs used as fuels in combustion units would be considered solid wastes unless: 1) the non-hazardous secondary materials (not otherwise discarded) remain under the control of the generator, and meet the legitimacy criteria; or 2) they are legitimate non-waste fuels that meet the legitimacy criteria and are produced from the processing of discarded non-hazardous secondary materials.

NHSMs used as a fuel in combustion units that are transferred to a third party are considered solid wastes unless a non-waste determination has been granted pursuant to the proposed petition process.

Except for the petition process, the proposed criteria are designed to be self implementing in nature, not requiring Agency action. As such, we are proposing that it will be the facility's (i.e., the facility that burns the material) responsibility to determine if the secondary material satisfies the proposed criteria that identifies which material is a solid waste when burned in a combustion unit.

Legitimacy Criteria

For legitimate fuels, non-hazardous secondary materials must

- be handled as a valuable commodity,
- have meaningful heating value,
- be used as a fuel in a combustion unit that recovers energy, and
- contain contaminants at levels comparable to those in traditional fuels.

Materials handled as a valuable commodity must either be managed in a manner similar to comparable fuels or otherwise be contained to prevent spill or leakage into the environment. NHSMs with a heating value of greater than 5,000 Btu/lb, as fired, would be considered to have meaningful heating value. However, non-hazardous secondary materials with a heating value lower than 5,000 Btu/lb, as fired, may also be considered to have a meaningful heating value if the combustion unit can cost-effectively recover meaningful energy. NHSMs will also have to be compared to contaminants in traditional fuels – contaminants being defined as HAPs listed under CAA Section 112(b) and the nine pollutants listed under CAA section 129.

For legitimate ingredients, the NHSM must be

- handled as a valuable commodity,
- provide a useful contribution,

- result in a valuable product or intermediate, and
- result in products that contain contaminants at levels that are comparable in concentration to those found in traditional products that are manufactured without the nonhazardous secondary material.

Petition Process

The petition process provides persons with an administrative process for a formal determination that their NHSM fuel has not been discarded and is indistinguishable in all relevant aspects from a fuel and therefore not a solid waste. The determination will be based on whether the NHSM has been discarded, is a legitimate fuel and the following criteria: (1) whether market participants handle the NHSM as a fuel rather than a solid waste; (2) whether the chemical and physical identity of the NHSM is comparable to commercial fuels; (3) whether the NHSM will be used in a reasonable time frame given the state of the market; (4) whether the constituents in the NHSM will be released to the air, water, or land from the point of generation to the combustion of the secondary material at levels comparable to what would otherwise be released from traditional fuels; and (5) other relevant factors.

These materials are generally not solid waste, according to the discussion in the preamble and EPA FAQ document:

- Clean biomass
- Clean biofuels processed from solid waste
- Wood products mill residuals (e.g., sanderdust, trim, resinated wood) within the control of the generator [but EPA has requested comment]
- Pulp and paper mills residuals (e.g., wastewater treatment plant sludge) within the control of the generator [but EPA has requested comment]
- TDF, where steel belts and wire have been removed
- On-spec used oil

These materials are generally solid waste, according to the discussion in the preamble and EPA FAQ document:

- painted wood (unless processed to remove the paint)
- pentachlorophenol, copper-based, and borate-based compound treated wood materials
- whole tires or shredded tires where a significant portion of the wire has not been removed
- off-specification used oil
- sewage sludge (unless processed)
- coal refuse abandoned in legacy coal refuse piles
- contaminated construction and demolition debris

These materials would have to meet the legitimacy criteria if generated onsite, meet the legitimacy criteria and have undergone processing if generated offsite, or be submitted in a petition if generated offsite and not processed:

- OCC rejects (recycling process residuals)
- Creosote treated wood (e.g., chipped railties)
- Biomass that is not “clean” and is generated offsite (e.g., resinated wood)
- Pulp and paper wastewater treatment residuals from another generator
- Paraffin

Important Definitions

Processing means any operations that transform discarded non-hazardous secondary material into a new fuel or new ingredient product. Minimal operations, such as operations that result only in modifying the size of the material by shredding, do not constitute processing for purposes of this definition. Processing includes, but is not limited to, operations that: remove or destroy contaminants; significantly improve the fuel characteristics of the material, e.g., sizing or drying the material in combination with other operations; chemically improve the as-fired energy content; and improve the ingredient characteristics. Drying may also not provide sufficient transformation to be considered processing.

Secondary material means any material that is not the primary product of a manufacturing or commercial process, and can include post-consumer material, off-specification commercial chemical products or manufacturing chemical intermediates, post-industrial material, and scrap.

Within control of the generator means that the non-hazardous secondary material is generated and burned in combustion units at the generating facility; or that such material is generated and burned in combustion units at different facilities, if the facility combusting the material is controlled by the generator; or if both the generating facility and the facility combusting the material are under control of the same person as defined in this section.

Control means the power to direct the policies of the facility, whether by the ownership of stock, voting rights, or otherwise, except that contractors who operate facilities on behalf of a different person as defined in this section shall not be deemed to “control” such facilities.

Generating facility means all contiguous property owned, leased, or otherwise controlled by the non-hazardous secondary material generator.

Alternative Approach for which EPA is Requesting Comment

Under this alternative, traditional fuels, which includes clean biomass, and that have been burned historically as fuels and managed as valuable products would not be solid wastes. In addition, non-hazardous secondary materials used as fuels or ingredients are excluded from the definition of solid waste if they both remain within the control of the generator and meet the legitimacy criteria.

In contrast to the proposed approach described above, all other non-hazardous secondary materials that are burned as a fuel or used as an ingredient in the combustion process would be solid wastes subject to the CAA section 129 standards if burned in a combustion unit. Also, all materials that result from processing of discarded non-hazardous secondary materials would be solid wastes. As with the proposed approach, wastes would include those secondary materials used as a fuel or ingredient not passing the legitimacy criteria, and those secondary materials used as a fuel that are managed outside the control of the generator. This solid waste designation would include materials, such as secondary wood products combusted on-site, coal refuse, and tires processed into TDF, on-spec used oil, and all secondary materials used as ingredients managed outside the control of the generator in combustion units. No petition process would be offered under this alternative.