Introduction

As per Condition A.4 of the permit, authorized feedstock for the INEOS New Planet BioEnergy (INPB) facility in Indian River County (IRC) consists of vegetative matter, yard waste, land clearing debris, untreated wood and municipal solid waste (MSW). These terms are defined in Rule 62-210.200, F.A.C.

- "Biomass" – Vegetative matter and untreated wood.
- "Yard Waste" – Vegetative matter resulting from landscaping and yard maintenance operations and other such routine property clean-up activities. It includes materials such as leaves, shrub trimmings, grass clippings, palm fronds, and brush.
- "Land Clearing Debris" – Uprooted or cleared vegetation resulting from a land clearing operation, including any untreated wood generated by the land clearing operation (e.g., untreated fence posts).
- "Untreated Wood" – Wood (including lighter pine, tree trunks, limbs and stumps, shrubs, and lumber) which is free of paint, glue, filler, pentachlorophenol, creosote, tar, asphalt, chromated copper arsenate (CCA), and other wood preservatives or treatments.
- "Solid Waste" – Includes garbage, refuse, yard trash, clean debris, white goods, special waste, ashes, sludge, or other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from domestic, industrial, commercial, mining, agricultural, or governmental operations.

This Appendix BMP contains best management practices related to materials separation, quality control and dust minimization. In this Appendix BMP, "feedstock" refers to any authorized feedstock at the facility; "vegetative matter" refers to yard waste and land clearing debris other than untreated wood; "construction and demolition (C&D) debris" refers to untreated wood other than yard waste and land clearing debris; and "MSW" refers to solid waste other than yard trash and clean debris. As such, the three non-overlapping categories of authorized feedstock are vegetative matter, C&D debris and MSW.

~~**Limited Use of MSW**~~

~~The routine feedstock for the INPB IRC facility consists of vegetative matter and C&D debris, blended together in varying ratios depending upon availability. On an annual average basis, the blend is approximately 90 percent vegetative matter with the remainder made up of C&D debris or MSW. The permit authorizes up to 100 percent use of MSW, but limits total MSW use to a maximum of 10,950 dry tons of MSW (15 percent moisture content). This represents the equivalent of 30 days of 100 percent MSW use.~~

Any material delivered to the facility that is not authorized by the permit as feedstock shall be collected and delivered to IRC Solid Waste Disposal District (SWDD) or to another disposal facility.

Vegetative Matter

Source: The vegetative matter is primarily yard waste from the IRC SWDD curbside collection program, supplemented by additional yard waste and land clearing debris delivered by the public directly to the county's customer convenience centers. Some vegetative matter may be delivered by the public to the INPB IRC facility.

Screening Prior to Shredding: Shredding may be performed either by the county before the vegetative matter is delivered to the facility or by the facility following delivery. Vegetative matter shall not be processed at the INPB IRC facility, however, unless it was collected under the following conditions:

- Personnel at scale houses or other receiving areas have been trained to prevent significant quantities of undesirable waste (more than 1 percent plastic, metal or other non-vegetative matter) from being disposed of in the vegetative matter stream.
- The public providing the yard waste have been educated in reducing the amount of plastic and garbage that is discarded with the yard waste through outreach activities such as posting signs at drop off areas.

Alternate Disposal: The permit authorizes a tipping floor, designed to accommodate a 48-hour period of operation (730 tons), with an additional hard-packed gravel overflow storage area for vegetative matter and C&D debris. The INPB IRC facility shall have the necessary agreements, logistics and procedures in place for at least one alternative disposal location should the storage capacity of the site be exceeded.

C&D Debris

Source: The C&D debris is primarily waste accepted by the IRC SWDD for disposal ~~in a dedicated cell in their landfill~~. Some C&D debris may be delivered by the public to the INPB IRC facility.

Screening Prior to Shredding: Shredding may be performed either by the county before the C&D debris is delivered to the facility or by the facility following delivery. To ensure that wood treated with chromated copper arsenate (CCA) is not included in the feedstock, C&D debris shall be processed at the facility under the following conditions:

- The C&D debris delivered from the county landfill shall be pre-screened under a wood management plan in compliance with Rule 62-701.730, F.A.C.
- Prior to on-site shredding, the C&D debris delivered directly to the INPB IRC facility shall be pre-screened under the Florida DEP "Guidance for the Management and Disposal of CCA-Treated Wood," August 10, 2005 draft or subsequent final version (attached).

Alternate Disposal: The permit authorizes a tipping floor, designed to accommodate a 48-hour period of operation (730 tons), with an additional hard-packed gravel overflow storage area for vegetative matter and C&D debris. The INPB IRC facility shall have the necessary agreements, logistics and procedures in place for at least one alternative disposal location should the storage capacity of the site be exceeded.

Municipal Solid Waste

Source: MSW to be used as feedstock will be waste diverted from the IRC SWDD Class I landfill or material delivered pre-shredded from a waste-to-energy facility. No MSW shall be delivered by the public to the INPB IRC facility.

Screening Prior to Shredding: Shredding may be performed either before the MSW is delivered to the facility or by the facility following delivery. Prior to on-site shredding, the INPB IRC facility shall develop and implement a detailed feedstock management plan to ensure removal of hazardous materials such as propane tanks from the waste.

~~Alternate Disposal: The permit authorizes a tipping floor, designed to accommodate a 48-hour period of operation (730 tons), with an additional enclosed, paved storage area for MSW, designed to accommodate two days of operation (730 tons). MSW shall be stored in the enclosed paved area, and any MSW which has been at the INPB IRC facility for more than 48 hours shall be returned to the county landfill.~~

Best Management Practices

In addition to the reasonable precautions to prevent emissions of unconfined particulate matter (PM) specified in the permit, the facility shall implement the following best management practices:

- The feedstock shall be delivered directly to the tipping floor.
- The feedstock shall not be sprayed with water to control dust emissions, unless water-spraying proves necessary to prevent emissions of unconfined PM.
- The feedstock piles shall be managed by front end loaders.
- Unnecessary movement of the piles shall be avoided to minimize fugitive emissions.
- The front end loaders shall feed the biomass or MSW to a conveyor system connected to the dryers.

NSPS, SUBPART KB – STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

~~Two tanks at the facility are subject to 40 C.F.R. part 60, subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. The NSPS applies to any storage tank with a capacity greater than or equal to 10,300 gallons that is used to store volatile organic liquids. The two tanks have a capacity greater than or equal to 40,000 gallons (nominal 72,727 gallons each) and store a liquid with a maximum true vapor pressure greater than 3.5 kilopascals (kPa). Consequently, the two tanks (product storage tank and denaturant storage tank) are subject to 40 C.F.R. part 60, subpart A (general provisions) as well as subpart Kb (storage vessels).~~

40 C.F.R. part 60, subpart Kb applies to each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) (19,800 gallons) that is used to store volatile organic liquids (VOL) for which construction, reconstruction or modification is commenced after July 23, 1984. This subpart does not apply, however, to the following:

- Storage vessels with a capacity greater than or equal to 151 m^3 (39,900 gallons) storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) (0.51 pounds per square inch absolute, psia), or
- with a capacity greater than or equal to 75 m^3 (19,800 gallons) but less than 151 m^3 (39,900 gallons) storing a liquid with a maximum true vapor pressure less than 15.0 kPa (2.18 psia).

The product storage tank will have a capacity of 94,755 gallons, and it will store material with vapor pressure greater than 0.51 psia, so it is subject to subpart Kb. The denaturant storage tank will have a capacity of 19,800 gallons, and it will store material with a vapor pressure greater than 2.18 psia, so it is also subject to subpart Kb. The other storage tanks at the INPB IRC facility are not subject to subpart Kb.

The complete provisions of subparts A and Kb may be provided in full upon request and are also available from the following links:

Link to Subpart A

Link to Subpart Kb

NSPS, SUBPART IIII - STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES

~~The feedstock grinder/shredder will be powered by a new Caterpillar C18 ACERT industrial diesel engine rated for 765 brake horsepower at 2100 revolutions per minute, or an equivalent engine from another manufacturer.~~

In the materials handling area (EU-001), the two shredders will be powered by model year 2011 Mercedes Benz OM 460 LA diesel-fired engines, or equivalent engines with respect to engine power output rating and emission rates. The two trammel screens will be powered by model year 2011 Daimler-Chrysler OM 904 LA diesel-fired engines, or equivalent engines with respect to engine power output rating and emission rates.

~~This engine is~~ These new engines are subject to the applicable requirements of 40 C.F.R. part 60, subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The provisions of this subpart may be provided in full upon request and are also available at the following link:

Link to Subpart IIII

NESHAP, SUBPART ZZZZ – STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES

~~The feedstock grinder/shredder will be powered by a new Caterpillar C18 ACERT industrial diesel engine rated for 765 brake horsepower at 2100 revolutions per minute, or an equivalent engine from another manufacturer.~~

In the materials handling area (EU-001), the two shredders will be powered by model year 2011 Mercedes Benz OM 460 LA diesel-fired engines, or equivalent engines with respect to engine power output rating and emission rates. The two trammel screens will be powered by model year 2011 Daimler-Chrysler OM 904 LA diesel-fired engines, or equivalent engines with respect to engine power output rating and emission rates. The emergency generator for the facility is an existing (1989 model year) Caterpillar 3412 diesel-powered unit, rated for approximately 500 kilowatts at about 750 horsepower.

These engines are subject to the applicable requirements of 40 C.F.R. part 63, subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The complete provisions of subpart ZZZZ may be provided in full upon request and are also available at the following link:

Link to Subpart ZZZZ