

Subsection N - Sector N-Scrap Recycling and Waste Recycling Facilities.

N.1 Covered Stormwater Discharges.

The requirements in Subsection N apply to stormwater discharges associated with industrial activity from scrap recycling and waste recycling facilities as identified by the SIC Codes specified under Sector N in Table D-1 of Appendix D of the permit.

N.2 Industrial Activities Covered by Sector N.

Permittees under Sector N are primarily engaged in the following types of activities:

- N.2.1 processing, reclaiming, and wholesale distribution of scrap and waste materials, such as ferrous and nonferrous metals, paper, plastic, cardboard, glass, and animal hides; and
- N.2.2 reclaiming and recycling of liquid wastes, such as used oil, antifreeze, mineral spirits, and industrial solvents.

N.3 Limitation on Coverage.

Separate permit requirements have been established for recycling facilities that only receive source-separated recyclable materials primarily from non-industrial and residential sources (i.e., common consumer products including paper, newspaper, glass, cardboard, plastic containers, and aluminum and tin cans). This includes recycling facilities commonly referred to as material recovery facilities (MRF).

- N.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) Non-stormwater discharges from turnings containment areas are not covered by this permit (see also Part N.4.2.3). Discharges from containment areas in the absence of a storm event are prohibited unless covered by a separate NPDES permit.

N.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the MSGP. Part N.4.1 contains a requirement that applies to all recycling facilities and is followed by Parts N.4.2 to N.4.4.4, which have requirements for specific types of recycling facilities. Implement and describe in your SWPPP a program to address those items that apply. Included are lists of BMP options that, along with any functional equivalents, should be considered for implementation. Selection or deselection of a particular BMP or approach is up to the best professional judgment (BPJ) of the operator, as long as the objective of the requirement is met.

- N.4.1 Drainage Area Site Map. (See also Part 2.1.2) Identify the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: scrap and waste material storage, outdoor scrap and waste processing equipment; and containment areas for turnings exposed to cutting fluids.

N.4.2 Scrap and Waste Recycling Facilities (Non-Source Separated, Nonliquid Recyclable Materials). Requirements for facilities that receive, process, and do wholesale distribution of nonliquid recyclable wastes (e.g., ferrous and nonferrous metals, plastics, glass, cardboard, and paper). These facilities may receive both nonrecyclable and recyclable materials. This section is not intended for those facilities that accept recyclables only from primarily nonindustrial and residential sources.

N.4.2.1 Inbound Recyclable and Waste Material Control Program. Minimize the chance of accepting materials that could be significant sources of pollutants by conducting inspections of inbound recyclables and waste materials. Following are some BMP options: (a) provide information and education to suppliers of scrap and recyclable waste materials on draining and properly disposing of residual fluids (e.g., from vehicles and equipment engines, radiators and transmissions, oil filled transformers, and individual containers or drums) and removal of mercury switches before delivery to your facility; (b) establish procedures to minimize the potential of any residual fluids from coming into contact with precipitation or runoff; (c) establish procedures for accepting scrap lead-acid batteries (additional requirements for the handling, storage, and disposal or recycling of batteries are contained in the scrap lead-acid battery program provisions in N.4.2.6); (d) provide training targeted for those personnel engaged in the inspection and acceptance of inbound recyclable materials; and (e) establish procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and non-leaking containers and are disposed of or recycled in accordance with RCRA.

N.4.2.2 Scrap and Waste Material Stockpiles and Storage (Outdoor). Minimize contact of stormwater runoff with stockpiled materials, processed materials, and nonrecyclable wastes. Following are some BMP options: (a) permanent or semi-permanent covers; (b) sediment traps, vegetated swales and strips, catch basin filters, and sand filters to facilitate settling or filtering of pollutants; (c) dikes, berms, containment trenches, culverts, and surface grading to divert runoff from storage areas; (d) silt fencing; and (e) oil and water separators, sumps, and dry absorbents for areas where potential sources of residual fluids are stockpiled (e.g., automobile engine storage areas).

N.4.2.3 Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage). Minimize contact of surface runoff with residual cutting fluids. Following are two BMP options that can be used singularly or in combination: (a) store all turnings exposed to cutting fluids under some form of permanent or semi-permanent cover. Stormwater discharges from these areas are permitted, provided the runoff is first treated by an oil and water separator or its equivalent. Identify procedures to collect, handle, and dispose of or recycle residual fluids that may be present; (b) establish dedicated containment areas for all turnings that have been exposed to cutting fluids. Stormwater runoff from these areas can be discharged, provided that the containment areas are constructed of concrete,

asphalt, or other equivalent types of impermeable material; there is a barrier around the perimeter of the containment areas (e.g., berms, curbing, elevated pads) to prevent contact with stormwater runoff; there is a drainage collection system for runoff generated from containment areas; you have a schedule to maintain the oil and water separator (or its equivalent); and you identify procedures for properly disposing of or recycling collected residual fluids.

- N.4.2.4 Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage). Minimize contact of residual liquids and particulate matter from materials stored indoors or under cover with surface runoff. Following are some BMP options: (a) good housekeeping measures, including the use of dry absorbents or wet vacuuming to contain, dispose of, or recycle residual liquids originating from recyclable containers, or mercury spill kits for spills from storage of mercury switches; (b) not allowing washwater from tipping floors or other processing areas to discharge to the storm sewer system; and (c) disconnecting or sealing off all floor drains connected to the storm sewer system.
- N.4.2.5 Scrap and Recyclable Waste Processing Areas. Minimize surface runoff from coming in contact with scrap processing equipment. Pay attention to operations that generate visible amounts of particulate residue (e.g., shredding) to minimize the contact of accumulated particulate matter and residual fluids with runoff (i.e., through good housekeeping, preventive maintenance, etc.). Following are some BMP options: (a) regularly inspect equipment for spills or leaks and malfunctioning, worn, or corroded parts or equipment; (b) establish a preventive maintenance program for processing equipment; (c) remove mercury switches from the hood and trunk lighting units, and remove anti-lock brake system units containing mercury switches (d) use dry-absorbents or other cleanup practices to collect and dispose of or recycle spilled or leaking fluids or use mercury spill kits for spills from storage of mercury switches; and (e) on unattended hydraulic reservoirs over 150 gallons in capacity, install protection devices such as low-level alarms or equivalent devices, or secondary containment that can hold the entire volume of the reservoir; (f) containment or diversion structures such as dikes, berms, culverts, trenches, elevated concrete pads, and grading to minimize contact of stormwater runoff with outdoor processing equipment or stored materials; (g) oil and water separators or sumps; (h) permanent or semi-permanent covers in processing areas where there are residual fluids and grease; (i) retention or detention ponds or basins; sediment traps, and vegetated swales or strips (for pollutant settling and filtration); and (j) catch basin filters or sand filters.
- N.4.2.6 Scrap Lead-Acid Battery Program. Properly handle, store, and dispose of scrap lead-acid batteries. Following are some BMP options (a) segregate scrap lead-acid batteries from other scrap materials; (b) properly handle, store, and dispose of cracked or broken batteries; (c) collect and dispose of leaking lead-acid battery fluid; (d) minimize or eliminate (if possible) exposure of scrap lead-acid batteries to precipitation or runoff; and (e) provide employee training for the

management of scrap batteries.

- N.4.2.7 Spill Prevention and Response Procedures. (See also Part 2.1.5.5) Minimize stormwater contamination at loading and unloading areas, and from equipment or container failures. Following are some BMP options (a) prevention and response measures for areas that are potential sources of fluid leaks or spills and (b) immediate containment and clean up of spills and leaks. If malfunctioning equipment is responsible for the spill or leak, repairs also should be conducted as soon as possible; (c) cleanup measures, including the use of dry absorbents. If this method is employed, an adequate supply of dry absorbent materials should be kept onsite, and used absorbent must be properly disposed of; (d) store drums containing liquids — especially oil and lubricants — indoors, in a bermed area, in overpack containers or spill pallets, or in other containment devices; (e) install overfill prevention devices on fuel pumps or tanks; and (f) place drip pans or equivalent measures under leaking stationary equipment until the leak is repaired. The drip pans should be inspected for leaks and potential overflow, and all liquids must be properly disposed of (as per RCRA); and (g) install alarms and/or pump shutoff systems on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in the event of a line break. Alternatively, a secondary containment system capable of holding the entire contents of the reservoir plus room for precipitation can be used. Use a mercury spill kit for any release of mercury from switches, anti-lock brake systems, and switch storage areas.
- N.4.2.8 Inspections. (See also Part 2.1.5.6) Inspect all designated areas of the facility and equipment identified in the plan monthly.
- N.4.2.9 Supplier Notification Program. As appropriate, notify major suppliers which scrap materials will not be accepted at the facility or will be accepted only under certain conditions.

N.4.3 Waste Recycling Facilities (Liquid Recyclable Materials).

- N.4.3.1 Waste Material Storage (Indoor). Minimize or eliminate contact between residual liquids from waste materials stored indoors and from surface runoff. The plan may refer to applicable portions of other existing plans, such as Spill Prevention, Containment, and Countermeasure (SPCC) plans required under 40 CFR Part 112. Following are some BMP options (a) procedures for material handling (including labeling and marking); (b) clean up spills and leaks with dry absorbent materials, a wet vacuum system, or a mercury spill kit (never vacuum spilled or leaking mercury); (c) appropriate containment structures (trenching, curbing, gutters, etc.); and (d) a drainage system, including appurtenances (e.g., pumps or ejectors, manually operated valves), to handle discharges from diked or bermed areas. Drainage should be discharged to an appropriate treatment facility or sanitary sewer system, or otherwise disposed of properly. These discharges may require coverage under a separate NPDES wastewater permit or

industrial user permit under the pretreatment program.

- N.4.3.2 Waste Material Storage (Outdoor). Minimize contact between stored residual liquids and precipitation or runoff. The plan may refer to applicable portions of other existing plans, such as SPCC plans required under 40 CFR Part 112. Discharges of precipitation from containment areas containing used oil must also be in accordance with applicable sections of 40 CFR Part 112. Following are some BMP options (a) appropriate containment structures (e.g., dikes, berms, curbing, pits) to store the volume of the largest tank, with sufficient extra capacity for precipitation; (b) drainage control and other diversionary structures; (c) corrosion protection and/or leak detection systems for storage tanks; and (d) dry-absorbent materials or a wet vacuum system to collect spills.
- N.4.3.3 Trucks and Rail Car Waste Transfer Areas. Minimize pollutants in discharges from truck and rail car loading and unloading areas. Include measures to clean up minor spills and leaks resulting from the transfer of liquid wastes. Following are two BMP options (a) containment and diversionary structures to minimize contact with precipitation or runoff, and (b) dry clean-up methods, wet vacuuming, roof coverings, or runoff controls.
- N.4.3.4 Inspections. (See also Part 2.1.5.6) The inspections must be performed monthly and include, at a minimum, all areas where waste is generated, received, stored, treated, or disposed of and that are exposed to either precipitation or stormwater runoff.

N.4.4 Recycling Facilities (Source-Separated Materials).

The following identifies considerations for facilities that receive only source-separated recyclables, primarily from nonindustrial and residential sources.

- N.4.4.1 Inbound Recyclable Material Control. Minimize the chance of accepting nonrecyclables (e.g., hazardous materials) that could be a significant source of pollutants by conducting inspections of inbound materials. Following are some BMP options (a) providing information and education measures to inform suppliers of recyclables which materials are acceptable and which are not, (b) training drivers responsible for pickup of recycled material, (c) clearly marking public drop-off containers regarding which materials can be accepted, (d) rejecting nonrecyclable wastes or household hazardous wastes at the source, and (e) establishing procedures for handling and disposal of nonrecyclable material.
- N.4.4.2 Outdoor Storage. Minimize exposure of recyclables to precipitation and runoff. Use good housekeeping measures to prevent accumulation of particulate matter and fluids, particularly in high traffic areas. Following are some BMP options (a) provide totally enclosed drop-off containers for the public; (b) install a sump and pump with each container pit and treat or discharge collected fluids to a sanitary sewer system; (c) provide dikes and curbs for secondary containment

(e.g., around bales of recyclable waste paper); (d) divert surface water runoff away from outside material storage areas; (e) provide covers over containment bins, dumpsters, and roll-off boxes; and (f) store the equivalent of one day's volume of recyclable material indoors.

N.4.4.3 Indoor Storage and Material Processing. Minimize the release of pollutants from indoor storage and processing areas. Following are some BMP options (a) schedule routine good housekeeping measures for all storage and processing areas, (b) prohibit tipping floor washwater from draining to the storm sewer system, and (c) provide employee training on pollution prevention practices.

N.4.4.4 Vehicle and Equipment Maintenance. Following are some BMP options for areas where vehicle and equipment maintenance occur outdoors (a) prohibit vehicle and equipment washwater from discharging to the storm sewer system, (b) minimize or eliminate outdoor maintenance areas whenever possible, (c) establish spill prevention and clean-up procedures in fueling areas, (d) avoid topping off fuel tanks, (e) divert runoff from fueling areas, (f) store lubricants and hydraulic fluids indoors, and (g) provide employee training on proper handling and storage of hydraulic fluids and lubricants.

N.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)

Table N-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring			
Subsector (Discharges may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration¹	Effluent Limit Guidelines
Scrap Recycling Facility (SIC 5093)	Chemical Oxygen Demand (COD)	120 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
	Total Recoverable Aluminum	0.75 mg/L	--
	Total Recoverable Copper ²	0.014 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
	Total Recoverable Lead ³	0.082 mg/L	--
	Total Recoverable Zinc ⁴	0.12 mg/L	--

¹You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

² The benchmark value of copper is determined as a function of hardness (in units of mg/L) in the water column.

The value given in Table N-1 (i.e. 0.014 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for copper:

$$\text{Benchmark} = (e^{[(0.9422)(\ln \text{hardness}) - 1.700]})/1000$$

Example: Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.9422)(\ln 175) - 1.700]})/1000 \\ &= (e^{3.166})/1000 \\ &= 23.72/1000 \\ &= 0.024 \text{ mg/L} \end{aligned}$$

The following are example benchmark values for copper:

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.014
125	0.017
150	0.021
175	0.024
200	0.027
225	0.030
250	0.033

³ The benchmark value of lead is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table N-1 (i.e. 0.082 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for lead:

$$\text{Benchmark} = (e^{[(1.273)(\ln \text{hardness}) - 1.460]})/1000$$

Example: Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.273)(\ln 175) - 1.460]})/1000 \\ &= (e^{5.1148})/1000 \\ &= 166.46/1000 \\ &= 0.17 \text{ mg/L} \end{aligned}$$

The following are example benchmark value for lead:

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.082
125	0.11
150	0.14
175	0.17
200	0.20

225	0.23
250	0.26

⁴ The benchmark value of zinc is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table N-1 (i.e. 0.12 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for zinc:

$$\text{Benchmark} = (e^{[(0.8473)(\ln \text{hardness}) + 0.884]})/1000$$

Example: Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8473)(\ln 175) + 0.884]})/1000 \\ &= (e^{5.26})/1000 \\ &= 192.51/1000 \\ &= 0.19 \text{ mg/L} \end{aligned}$$

The following are example benchmark values for zinc:

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.12
125	0.14
150	0.17
175	0.19
200	0.22
225	0.24
250	0.26