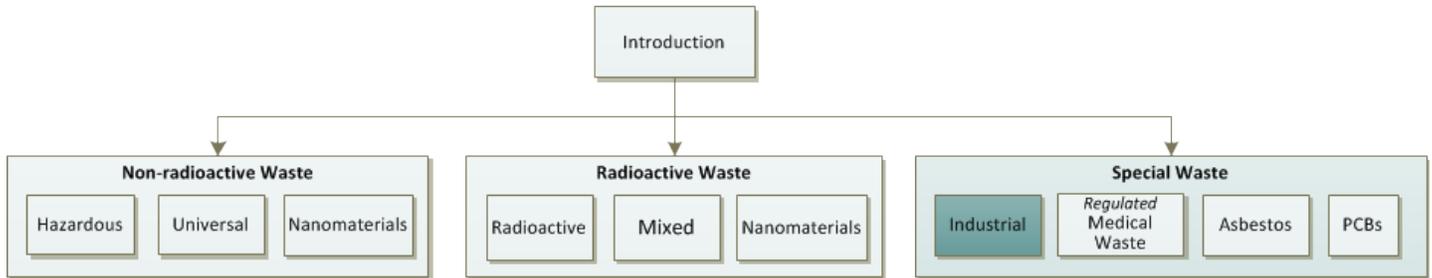


SUBJECT AREA PROCEDURE CONTENT



Waste Subject Area

Effective Date: **Sep 7, 2016** ([Rev 1.0](#))
Periodic Review Due: **Sep 7, 2018**



For all BNL staff, Users, Guests, and Contractors working at facilities owned, leased, or operated by BNL, who generate, characterize, accumulate, and submit [industrial waste](#) for disposal, as well as those who prepare and ship industrial waste for off-site energy recovery. It also applies to BNL staff conducting work off-site, when the waste generated by the off-site work will be managed at BNL.

Industrial Waste

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Industrial waste includes wastes that are not hazardous waste, i.e. not characteristic (flammable, corrosive, reactive, toxic) and not specifically listed hazardous wastes. Industrial wastes include Construction and Demolition (C&D) debris, 'used oils' not containing hazardous wastes, non-hazardous chemicals, and wastewaters not permitted to enter the Sanitary Waste System

BNL is committed to integrating environmental stewardship into all facets of our missions. This stewardship includes proper management of all waste streams created during performance of Laboratory research and operations. This subject area describes how "industrial and other special wastes" are managed. Failure to follow the requirements in this subject area can result in impact to the environment (e.g., contamination of landfills, soil, air, surface or groundwater); impact to human health and safety; disciplinary action; enforcement actions by regulatory agencies (including penalties, fines and shutdown of operations); and significant characterization or clean-up expenses for your project or the Laboratory.

1. Generating and Characterizing Industrial Waste [^back to top](#)

- Before waste is generated, the responsible individual (waste generator) reviews pollution prevention and waste minimization techniques to minimize waste generation, and ensure proper management of waste that cannot be avoided.
 - During project-planning phases, identify any project wastes, emissions or effluents, and obtain any required permits. See the [Work Planning and Control for Experiments and Operations](#) Subject Area.
 - Apply technically feasible and economically practical pollution prevention or waste minimization techniques. See the [Pollution Prevention and Waste Minimization](#) Subject Area.
 - Ensure that a disposal pathway exists for all project-related waste streams. Contact your [Environmental Compliance Representative \(ECR\)](#) or a [Waste Management Representative \(WMR\)](#) for assistance.
- Wastes that will be generated must be characterized to ensure they are properly managed and disposed. The waste generator must determine if the waste to be generated is industrial waste.
 - Generally, if the waste is listed in the exhibit [List of Industrial and Other Special Wastes](#), and has not been contaminated by other hazardous materials, then it is industrial waste and must be managed in accordance with this subject area. If the waste is **not** on this list, then contact your [Waste Management Representative \(WMR\)](#) or an [Environmental Compliance Representative \(ECR\)](#).
 - All wastes must be properly characterized and the characterization must be documented via analytical chemical testing and/or process

knowledge. Acceptable forms of documentation include work planning documents, experimental safety reviews, Process Assessment Forms (PAFs), or a [Nonradioactive Waste Control Form](#) in the [Hazardous Waste](#) section. (**Note:** Only select industrial wastes require this form. See the section [Submitting Industrial Waste to Waste Management for Disposal](#) for details).

Note: A [Waste Management Representative \(WMR\)](#) or an [Environmental Compliance Representative \(ECR\)](#) can assist in the characterization and management of industrial wastes. Refer to the [List of Industrial and Other Special Wastes](#) for additional guidance.

Guidelines

If sufficient documentation is unavailable, then generators should manage the waste conservatively and in accordance with the requirements of the [Hazardous Waste](#) section, and allow the Environmental Protection Division representative to make the ultimate determination of whether or not the waste is Industrial or Hazardous. This determination will be based on the information provided by the generator including analytical data process information, process knowledge, or any combination.

Refer to the [How Do I Manage this Waste Stream?](#) Web site for additional guidance on managing a variety of waste streams.

Refer to the [Hazardous Waste Generator Characterization Guidance](#) to aid in determining whether waste should be managed as hazardous waste.

2. Accumulating Industrial Waste [^back to top](#)

1. Before generating Industrial Waste, the waste generator must ensure that proper packaging is utilized. Assistance can be provided by an Environmental Protection Division (EPD) representative (e.g., [Waste Management Representative \[WMR\]/Environmental Compliance Representative \[ECR\]](#) or SME) to determine the appropriate packaging for the waste. Select appropriate containers that are in good condition (structurally sound), and made of materials that are compatible with the waste. (Refer to the [Chemical Safety](#) Subject Area for additional information).

All staff who handle chemicals or have responsibility for managing waste must be familiar with appropriate handling and emergency procedures. Before handling chemicals or managing waste that will be routed to Waste Management (see the section [Submitting Industrial Waste to Waste Management for Disposal](#) for details), complete any required training. See the [Training and Qualifications](#) Web Site (**Note:** All Industrial and Hazardous Wastes transferred to Waste Management requires the waste generator to complete the HPRCRIGEN-3 training).

- **Do not** reuse/refill gas cylinders unless you have the following documentation:
 - A Work Planning Document/equivalent; and,
 - If the gas is one of the Freon types, you must have a required EPA Certification.

- **Do not** use containers that are dented, severely rusted, are leaking, have apparent structural defects and/or deteriorated, or otherwise damaged. Avoid using embrittled or deteriorated plastic carboys or any other container that appears to be structurally damaged/compromised and could cause a release/leak from the container.
 - **Do not** use containers that previously contained materials that are incompatible with the waste being added (e.g., refer to the [incompatibility exhibits](#) and/or refer to the [Chemical Safety](#) Subject Area). Use containers that have previously contained the same type of waste (e.g. non-halogenated oils separate from halogenated/refrigeration oils, adsorbents soaked with fuel oil separate from adsorbents mixed with gasoline),
 - **Do not** fill containers of wastes to levels that will cause personnel injury and/or damage to the container due to **volumetric** changes caused by heat/cold extremes.
 - Use DOT-approved or equivalent containers that will not cause leaks/releases (e.g., 55-gallon DOT-approved drums or containers available from the Procurement and Property Management Division. See the Guidelines below for additional information.
2. Segregate waste streams and **NEVER** mix incompatible chemicals/materials inside the same container as this may: cause personal injuries, make recycling impossible, cause a chemical reaction that generates heat/toxic fumes, and/or result in a mixture that needs to be managed as a hazardous waste.
 3. In coordination with your WMR or ECR, label the Industrial Waste container with the GREEN Nonhazardous Waste Label, and additionally, if the waste is any type of oil, add the following description to the label, "USED OIL". Otherwise, clearly identify the contents (e.g., scrap metal, solder). Labels must be legible and visible for inspection.
 - Labels are stock items that can be obtained from the Procurement and Property Management Division.
 - In the event that the primary container is leaking, a secondary overpack drum must be utilized and generators must ensure that the GREEN label is placed on the outermost container. (**Note:** Salvage/Overpack drums must NOT be used as a primary container.) Alternatively, transfer the contents of a leaking container into another DOT-approved container using appropriate Work Planning Documents.
 4. Provide secondary containment for **Industrial Waste container(s) under the following circumstances:**
 - If there is a potential for a spill or leak of an Industrial Waste liquid to reach any of the following - storm drain, the environment, a sanitary drain, the Sewer Treatment Plant (for liquids not on the pre-approved posting) or could reach an area that will impair the safety of personnel; or
 - If >250 gallons of liquid Industrial Wastes, or over 2,000 lbs. of solid Industrial Wastes are being stored. See the [Storage and Transfer of Hazardous and Nonhazardous Materials](#) Subject Area for additional requirements.

Maintain secondary containment free from accumulated liquids (e.g., spills, rainwater). Maintain separate areas for the storage of incompatible waste streams/chemicals (e.g., storage cabinets, berms, etc.).

5. Store the waste in an appropriate accumulation area in a way that prevents any release(s) to the environment. See the Guidelines section below.
 - Keep the container closed at all times, except when waste is being added to or removed from the container;
 - Provide adequate control of containers to ensure that unauthorized persons do not add incompatible waste types into the container;
 - Do not open, handle, or store containers in a manner that may rupture the container, or cause it to leak;
 - Protect wastes from weather extremes (cold and hot temperatures);
 - In the event of a spill, breakage, or leakage, follow the requirements in the [Spill Response](#) Subject Area.

Note: Generators should identify routine accumulation areas and notify the [Hazardous Waste Program Manager](#) of their locations to facilitate pickups by Waste Management (WM).

6. Maintain analytical records or documented process knowledge regarding the constituents of waste being generated and accumulated. Failure to do this can result in expensive analytical costs. Keep all records in accordance with the [Records Management](#) Subject Area.
7. Maintain ownership and responsibility for the waste until it is transferred to WM and/or a third party EPD-approved vendor.
 - The responsible department for the waste at all times is the generating department including legacy wastes.
 - If the waste generator or the waste-generating process moves to a different location, the generator must ensure that the waste is also moved to the new location, or dispositioned to WM/EPD in accordance with this subject area.

- If a waste-generating project is interrupted for an extended period (e.g., six months), or discontinued (e.g., the experiment ends), the waste must be dispositioned to WM/EPD for proper off-site disposal.

8. When the waste is ready for pick-up by WM, secure the container lid tightly and ensure that no further waste is added to the container.

Note: The labeling of accumulation start dates on non-hazardous waste containers is optional.

Guidelines

- For Industrial Wastes going to WM, 90-day accumulation areas or satellite accumulation areas for hazardous waste management may be used to temporarily accumulate industrial or other special Wastes (until pickup). See the [Hazardous Waste](#) section. However, this is **not** a requirement and there are no required accumulation time limits for Industrial Wastes. Separating hazardous waste from industrial or other special wastes by a rope, or cordoning the area off, is recommended to avoid confusion when evaluating regulatory compliance, as the hazardous waste requirements are stricter than the Industrial Waste requirements. In any case, generators must list the location of the Industrial Waste on the Nonradioactive Waste Control Forms.
- The accumulation area should be dry or containers should somehow be protected from moisture. Indoor storage is preferred to protect containers from the elements. If waste must be stored outdoors, contact the Environmental Protection Division for approvals, as secondary containment may be required for certain materials. Minimally, place containers on an impervious surface (e.g., asphalt), not directly on the grass or soil. Containers should be protected from the elements appropriate means (e.g., with a tarp cover) to prevent container damage/rusting and water infiltration. Containers with liquids should be elevated from ground level (e.g., placed on pallets) and steps must be taken as required to prevent container damage and spills during weather extremes (cold/heat).
- For waste containers that are being added to during equipment operation (e.g., lab equipment with discharge lines), tubes should run through a stopper with a hole in it, or a self-closing funnel with a lid should be used to prevent spillage and evaporation or equivalent means should be used to prevent spills/releases/leaks.
- Aqueous waste approved for discharged to the sanitary sewer system (in accordance with the [Liquid Effluents](#) Subject Area) should not be stored in unlined steel drums, as this may result in metals-contamination of the waste and could cause the material to be non-dischargeable.
- Additional Guidelines for containers:
 - For single wastes streams with volumes less than five gallons, it is acceptable to use the original container the raw material was shipped in, as long the container is in good condition and/or has the proper U.S. Department of Transportation approvals for reuse (see the [Transportation of Hazardous and Radiological Materials Off-site](#) Subject Area if the material is hazardous).
 - For single waste streams with volumes greater than five gallons, accumulation must be in DOT-approved shipping containers
 - **Do not** use glass containers larger than four liters for chemical accumulation.
- Ensure that the container is protected and that unauthorized (incompatible wastes) additions cannot be made. Identify one entity to be in charge of the container. That person must secure the container under his/her control. If more than one person is contributing waste to a specific waste container, then the person responsible for the waste must maintain an inventory record that tracks additions to the container. The inventory record should list the type of material added, volume added, date added, and name of generator.
- Refer to the [How Do I Manage this Waste Stream?](#) Web site for additional guidance on managing a variety of waste streams.

3. Submitting Industrial Waste to Waste Management for Disposal [^back to top](#)

This section applies to industrial waste being routed to Waste Management. It does NOT apply to used oils being sent off-site for energy recovery, recyclables, radioactive waste, hazardous waste, mixed waste, regulated medical waste, or municipal solid waste (regular trash such as food, food-stained paper/cardboard, other office debris).

Industrial and special waste being submitted for disposal must be accompanied by a completed [Nonradioactive Waste Control Form](#). It must also be accompanied by a [Process Knowledge Certification Form](#), if it was stored in a Radiological Area listed in the form. Refer to the section on [Hazardous Waste](#). (**Note:** All Industrial and Hazardous Wastes transferred to Waste Management requires the waste generator to complete the HPRCRIGEN-3 training.)

3.1 Industrial or Special Waste

The waste generator follows this procedure to submit Industrial or Special Waste for disposal (it does NOT include Moratorium or Suspension Encumbered Metals disposal).

1. Complete a [Nonradioactive Waste Control Form](#). Follow the instructions on the form and provide all required information, ensure the information is accurate and complete, and then date and sign the certification statement.
2. If the waste has **not** been in a Radiological Area listed in the Process Knowledge Certification Form, then proceed to step 5. If the waste has been in a Radiological Area, then proceed to step 3.
3. If the waste has been in a Radiological Area listed in the Process Knowledge Certification Form, initial the space provided on the lower section of the [Nonradioactive Waste Control Form](#) located beneath the "precautions" section. Transfer the Nonradioactive Waste Control Form number onto the upper right-hand corner of the [Process Knowledge Certification Form](#). Answer each question on the above form.
4. Submit the Nonradioactive Waste Control Form (and the Process Knowledge Certification Form, if required) to the [Waste Management Representative](#) (if applicable) or the [Hazardous Waste Program Manager](#).
5. Notify and obtain approval from the designated waste accumulation area manager before placing waste into the area. Move the waste to the designated area.

Note: If you do not have access to a designated storage area, or it is not practical to move the waste, then notify Waste Management (WM) of the location of the waste and make arrangements for special pick-up.

3.2 Moratorium Metals or Suspension Encumbered Metals

1. Follow the [Management of Moratorium and Suspension Encumbered Metals](#) Subject Area.
2. For Moratorium Metal Wastes that meet Authorized Limit Release values and/or for Encumbered Metals that meet pre-approved authorized release levels as defined by DOE Order 458.1, complete a [Process Knowledge Form for Clean and Suspension Encumbered Metals](#) in the [Management of Moratorium and Suspension Encumbered Metals](#) Subject Area and follow the instructions—contact the Radiological Control Division (RCD), provide all required information, ensure the information is accurate and complete the form and then date-sign.
3. Contact WM's [Hazardous Waste Program Manager](#) and arrange for transfer of the above material to the designated area at WM.
4. WM will verify the information on the above form and direct the loading into a waste container. Then, WM will arrange for off-site shipment to a disposal facility (non-recycling facility).

Guidelines

Generators should retain a copy of the Nonradioactive Waste Control Form, the Hazardous Waste Process Knowledge Certification Form, and the Process Knowledge Form for Clean and Suspension Encumbered Metals for their records.

4. Used Oil for On-site Energy Recovery [^back to top](#)

Used Oil intended for burning for energy recovery at the Central Steam Facility must be analyzed, or there must be sufficient process knowledge to ensure it meets New York State regulations 6 NYCRR Part 374-2 and 225-2, Used Oil Specifications and the Laboratory's Title V Air Permit. See the [Waste Oil Analysis Requirements](#).

The responsible individual (waste generator) is responsible for ensuring that used oil to be burned for energy recovery meets the BNL Central Steam Plant's used oil acceptance criteria. Contact your [Environmental Compliance Representative \(ECR\)](#) or a [Waste Management Representative \(WMR\)](#) for assistance.

For off-site energy recovery, see the section [Industrial Waste for Off-Site Energy Recovery](#).

1. Do not mix hazardous wastes with Used Oil, and do not handle mixtures of hazardous waste and Used Oil as Used Oil.
2. The responsible individual must ensure the Used Oil meets the Central Steam Facility's waste acceptance criteria.
The Central Steam Facility requires analysis of waste oils each time they are submitted for energy recovery. Generators must arrange for a representative sample of the Used Oil to be analyzed for the constituents listed in the [Waste Oil Analysis Requirements](#), using the designated test methods.
Note: The laboratory conducting the analysis must be accredited by the NYS Health Department's Environmental Laboratory Accreditation Program.
3. The generator must submit the analytical results to the [Environmental Compliance Representative \(ECR\)](#) or a designated alternative for review and approval.
4. If the analytical results for Used Oil that is planned to be burned at the Central Steam Facility show that the Used Oil meets the definition of "on-specification" Used Oil, the ECR prepares written notification to the Used Oil generator, the Steam Plant Supervisor, and appropriate Environmental Protection Division (EPD) personnel, petitioning the Used Oil as "on-specification" Used Oil suitable for burning at the Central Steam Facility for energy recovery."
If Used Oil does not meet the definition of "on-specification" Used Oil, the ECR will assist the generator with proper classification and will instruct the generator to route the Used Oil through EPD for proper disposal. Under special circumstances, on-specification Used Oil may be disposed of through an off-site, Used Oil burner. However, the ECR/designated Waste Management Representative must approve of the transfer.
5. For "on-specification" Used Oil that has been approved by the Central Steam Plant Facility and EPD, the generator arranges for transfer to the the Central Steam Facility.
6. Keep Used Oil within containers that are in good condition (no severe rusting, apparent structural defects, or deterioration) and/or inside tanks registered by appropriate regulatory entities (e.g., NYSDEC - Petroleum Bulk Storage, SCDHS Article 12) that will prevent any spills/releases. Additionally, the containers and/or tanks must comply with all elements of the site's Spill Prevention Control and Countermeasure (SPCC) Plan and "USED OIL" markings must also be affixed to all containers and/or tanks, including tank fill lines.

Guidelines

To be cost-effective in terms of analytical costs, rigging costs, and other miscellaneous costs vs. handling as an industrial waste through the Environmental Protection Division (EPD), the quantity of Used Oil should exceed a set amount. If less than the set amount of Used Oil requires handling, generators may handle Used Oil through the EPD, or through a BNL-approved, off-site Used-Oil recycler (see ECR/SME for additional information). (**Note:** Transferring Used Oil to EPD has benefits in terms of reduced potential for spills, allowing for economies of scale [bulk shipments are cheaper vs. individual container shipments]. Contact the [Hazardous Waste Program Manager](#) for more information.)

Generators should maintain a copy of any analytical results of oils tested for their records as per the [Records Management](#) Subject Area.

5. Managing Recyclables [^back to top](#)

Industrial or special waste to be recycled consisting of beverage cans (aluminum cans), #1/#2 plastic bottles, glass, tin cans; cardboard (corrugated and non-corrugated), mixed paper; "EMPTY" (no residual pressure/no residual liquids) aerosol cans, excess equipment that has been properly excessed as per PPM requirements, metal chips and turnings from machine shop-related operations, , used Tyvek® personal protective equipment (PPE), Styrofoam™ peanuts and packing materials, lead solder/bricks, printer and toner cartridges, and scrap metal (includes oil filters). Recycling conserves valuable natural resources, reduces pollution, reduces waste disposal costs, and conserves limited solid waste landfill capacity. Recyclables are segregated and collected in designated containers/areas.

The waste generator follows this procedure to submit industrial or special waste for recycling when the waste container is full, or the generating process ends (e.g., the project is terminated).

5.1 Aerosol Cans

Aerosol cans: "empty"/atmospheric pressure/no residual liquids.

1. Ensure the aerosol can is "EMPTY" (must be punctured using an approved aerosol can puncturing system and punctured can must be at atmospheric pressure) and have **no** residual propellant gas and have **no** residual liquids. The following materials may not be punctured:
 - Acutely hazardous wastes (e.g., cyanides, endrin); contact your [Environmental Compliance Representative \(ECR\)](#) or a [Waste Management Representative \(WMR\)](#) for assistance.
 - Pesticide/herbicide/insecticides that are regulated for use (Pesticide Applicator may only apply these);
 - Foam-containing material (e.g., Polyurethane insulation);
 - Oven cleaner (corrosive);
 - Any other item that is incompatible with the puncturer or the liquid inside the waste container being used for liquid collection.

Any aerosol can(s) that cannot be punctured must be disposed of according to the section on [Hazardous Waste](#) through the Environmental Protection Division (EPD). If aerosol can(s) cannot be punctured right away, place unpunctured can(s) inside a Satellite Accumulation Area with a complete Hazardous Waste label as per the section on [Hazardous Waste](#). Do NOT leave unpunctured aerosol can(s) on top of the waste drum/container or inside flammable cabinets.

Only trained individuals may use approved aerosol can puncturers, and logbooks must be kept for documenting the # of cans punctured for the purpose of determining when the residual gas filters generated during puncturing must be changed as per the manufacturer's recommendations.

2. Place punctured cans that are free of residual liquids and any residual pressure in a designated scrap metal container or dumpster (see the F&O Site Resources Representative for additional information).

5.2 Lead-Acid Vehicle Batteries

For batteries meeting the definition of "universal wastes" (e.g., lithium, NiCd, mercury, nickel metal halide) see the section on [Batteries](#) on the [How Do I Manage this Waste Stream?](#) Web site. This procedure applies exclusively to batteries not containing hazardous constituents (e.g., alkaline/flashlight batteries), and includes recyclable automotive-type lead-acid batteries.

Also, lead-acid batteries NOT being recycled/regenerated off-site or reclaimed off-site must be managed in accordance with the section on [Hazardous Waste](#). Generators should take advantage of the existing recycling program for lead-acid vehicle batteries through the F&O Motor Pool (Staff Services).

1. The responsible individual must
 - Ensure that batteries are separated by type (alkaline vs. all others);
 - Place a nonconductive material over the battery electrodes to prevent shorts (Does NOT apply to small alkaline batteries less than 9 volts);
 - Safely store rechargeable batteries that are not fully discharged to prevent contact with other electrodes, or a metal object, such as the inside of a metal drum.
2. Arrange for pickup and recycling.
 - Comply with the [Movement by Vehicle of Hazardous and Radiological Materials On-Site](#) Subject Area;
 - For alkaline batteries - complete a Shipping Memo Form available in PeopleSoft and include an MSDS. Do NOT fill battery boxes beyond their weight limit (see ECR/WMR) for more information.
 - For vehicle batteries (lead acid), generators must call the F&O Motor Pool (Building 423) to make arrangements for accepting the transfer. (**Note:** The Motor Pool does NOT accept sealed gel cell batteries).
 - Do not drain the liquid contents of any lead-acid batteries unless a Work Permit has been completed and reviewed.
 - Before transferring liquid lead-acid batteries to the Motor Pool, keep them upright and, in appropriate secondary containment (e.g., containment trays or five-gallon plastic bucket).

5.3 Beverage Bottles/Cans/Containers

1. Rinse out aluminum cans, #1/#2 plastic bottles and non-sharp glass and place into dedicated recycling containers that are designated for combined storage. Contact the F&O Custodial Supervisor if extra recycling container are needed (usually one in every lunch/break area).
2. To protect custodial and waste-handling staff from injury, broken glass or glass with sharp shards cannot be placed into the beverage recycling container. Follow the section on [Sharp Object Wastes - Non-Medical](#).

5.4 Cardboard

Cardboard: corrugated/ribbed and low-grade cardboard.

1. Flatten cardboard boxes as much as practical to minimize volumes.
2. If generators have large quantities of corrugated cardboard, then they should be placed directly into the cardboard dumpster labeled "Cardboard Only" usually located at the Loading Docks or rear of individual buildings. For small quantities of cardboard, place flattened cardboard next to your blue recycling container for pick-up or contact the local Custodian. In any case, do not leave cardboard items where they could be tripping or fire hazards.

5.5 Excess Equipment

Excess electronic items such as laptops, servers, CRT (cathode ray tubes), printers, plotters, power supplies, etc. must be managed as scrap metal as per Procurement & Property Management Group S.O.P. Manual [380.7 Disposal of Certified and Non-certified Electronic Products](#). Additionally, the [Process Knowledge Form for Clean and Suspension Encumbered Metals](#) in the [Management of Moratorium and Suspension Encumbered Metals](#) Subject Area must be completed.

1. Contact the [Distribution Group Supervisor](#) in Procurement and Property Management (PPM) to recycle/excess/dispose of excess equipment. Generators must meet the requirements listed in the [Procurement & Property Management Group S.O.P. Manual](#). Any metallic excess equipment requires a [Process Knowledge Certification Form \(PKCF\) for Clean and Suspension Encumbered Metals](#), available in the [Management of Moratorium and Suspension Encumbered Metals](#) Subject Area, in order for PPM to transfer the equipment to their storage area.
2. Contact the [Distribution Group Supervisor](#) in PPM for pickup for recycling.

5.6 Lead Solder Waste

1. See the exhibit [Recycling and Disposal of Lead](#) in the [Lead](#) Subject Area.
Note: Lead solder waste not being recycled is a hazardous waste, and must be managed in accordance with the section on [Hazardous Waste](#).

5.7 Mixed Paper

Mixed paper: magazines, newspaper, office paper, phonebooks, junk mail, color inserts, textbooks, catalogs, manila/file folders, post-its, blueprints, greeting cards, and non-metallic photographic paper.

Note: For the disposal of old records and associated carbonless and carbon paper manufactured prior to 1979, refer to the [PCB Management](#) Subject Area.

1. Remove mixed paper from binders, plastic spirals, plastic covers, and any other covering (book binders do NOT have to be removed).
2. Place mixed papers materials into dedicated recycling containers. If larger container is needed for special clean-out, contact the F&O Custodial Supervisor. Reuse or dispose of the coverings.
Note: Do not recycle food-stained paper—normal trash.
3. F&O Custodial staff empty the paper recycling containers in general office areas.

5.8 Printer and Toner Cartridges

1. Place the used cartridge in the packaging that the replacement (new/rebuilt) cartridge came in, seal it, and write "RECYCLE" in large print on the outer package.
2. Leave the item in the PPM Warehouse Delivery and Pickup Point in your building or contact PPM to request a pickup.

5.9 Scrap Metal

This section applies to Clean Scrap Metal as per the [Management of Moratorium and Suspension Encumbered Metals](#) Subject Area.

Note: Beryllium chips and turnings must be managed in accordance with the section on [Hazardous Waste](#).

Scrap metal is also recycled; however, there are additional PPM requirements. Scrap metal that is uncontaminated including aluminum, copper, lead, steel/stainless steel, cast iron, tin, and brass must be handled as per the Procurement & Property Management Group S.O.P. Manual [380.6 Control of Scrap Metals](#). Scrap precious metals must be handled as per PPM's SOP [380.3 Scrap Precious Metals](#). Additionally, the [Process Knowledge Form for Clean and Suspension Encumbered Metals](#) in the [Management of Moratorium and Suspension Encumbered Metals](#) Subject Area must be completed.

1. If there is a significant amount of a specialty metal (e.g., brass, copper, stainless steel, lead), then segregate the metal by type in order to

facilitate recycling. Segregation yields a greater return from the metals recycling vendor.

- Utilizing a Work permit or other planning document, remove any free liquids (e.g., oil, cutting fluid) and/or remove any solid hazardous contamination from the scrap metal, if any. Collect the wastes liquid/solid, characterize it, and manage as Industrial Waste or Hazardous Wastes.
- Complete the [Process Knowledge Certification Form \(PKCF\) for Clean and Suspension Encumbered Metals](#) in the [Management of Moratorium and Suspension Encumbered Metals](#) Subject Area.

The above PKCF must be submitted to and approved by Procurement and Property Management before acceptance of the scrap.

Note: PPM will only accept Clean Scrap Metal.

- Collect the scrap metal in an appropriate container and prevent precipitation from entering the container. Also, accumulation containers must not leak liquids.
 - For Empty Drums:** Ensure that the top of closed headed drums are removed and that any oil residue that may cause an oil release/spill has been removed from the drum. Label empty drums with the word "EMPTY." (**Note:** Do not use the white EMPTY labels typically used for empty radioactive containers). Store empty drums with the bungs or covers tightly closed to prevent water infiltration. If empty drums are being returned to the manufacturer (e.g., for a refund or for reuse), the container is DOT-certified for reuse, and PPM has approved the arrangement, then transfer them as per PPM's requirements.
 - For Lead that is not radiologically contaminated, after completing the above form in step #3:**
 - Use the proper Personal Protective Equipment (PPE) for handling lead and use proper Work Planning;
 - Accumulate lead indoors and make arrangements for transfer to the PPM Storage Building/Area so as to prevent the lead from entering the environment. If large lead items cannot be accumulated inside, then contact PPM and make arrangements for pick-up or take preventative measures to prevent lead contamination from entering the environment;
 - Do not accumulate lead near floor drains;
 - Consider painting, or otherwise covering brick/sheet surfaces to prevent oxidation.
 - Contact the [Distribution Group Supervisor](#) in PPM to arrange for pickup and/or off-site recycling.

5.10 Used Oil Filters

Generators may collect Used Oil filters as Industrial Waste and be disposed of through the Waste Management Division, or the drained filters may be recycled as scrap metal. If the filters are handled as scrap metal, then follow the following steps:

- Hot-drain the filter (remove the filter from the engine while warm) and immediately drain free flowing oil into the "Used Oil" container, drum, or tank.
- Puncture the filter dome, then place the filter on a rack/draining device to drain into a Used Oil container/drum or a Used Oil tank for a sufficient time so that free-flowing residual oil is not present.

The filter may also be crushed or dismantled in addition to being hot drained.
- Collect oil filters in a metal drum labeled with an Industrial Waste label and marked with the words "Used Oil". Complete a [Process Knowledge Certification Form \(PKCF\) for Clean and Suspension Encumbered Metals](#) in the [Management of Moratorium and Suspension Encumbered Metals](#) Subject Area and contact the [Distribution Group Supervisor](#) in PPM to arrange for pickup and off-site recycling/disposal.

6. Industrial Waste for Off-site Energy Recovery [^back to top](#)

Used Oil Industrial Waste that has adequate BTU (heat content) value for energy recovery may be shipped to a NYSDEC-permitted, off-site, Waste-To-Energy (WTE) Facility. Examples of the waste types that may fit into this category include non-halogenated oils, oily rags and rags contaminated with spent cutting fluid, oil spill debris (e.g., speedi-dri, pads, pigs), oily debris (e.g., personnel protective equipment soaked with oil) and/or other debris saturated with fuels/other flammables. Any wastes contaminated with or containing hazardous constituents, such as hazardous solvents, lead or mercury cannot be burned for energy recovery, and must be managed in accordance with the [Hazardous Waste](#) section. Hazardous wastes must NEVER be mixed with Used Oil or oil-contaminated debris.

Waste-To-Energy (W-T-E) facilities may accept BNL non-hazardous Used Oil for energy recovery if it meets their permitted acceptance criteria. Additionally, approval from the applicable state regulatory agency may be required in some cases. The shipment of Used Oils **not** routed through Waste Management requires the approval from the [Industrial Waste Program Manager](#).

- Industrial waste generators must conduct a proper waste characterization and must ensure that no hazardous wastes are mixed with their non-hazardous waste(s). As part of the waste characterization process, all actual and potential components of the non-hazardous waste stream (i.e., oils, lubricants, clean-up materials) must be submitted to the [Environmental Compliance Representative \(ECR\)/Waste Management Representative \(WMR\)](#).
- An Environmental Compliance Rep.(ECR)/Waste Management Representative (WMR) must review waste characterization data to ensure proper handling and proper disposal pathways.
- Through the ECR/WMR and the W-T-E Facility, Used Oil generators must receive Used Oil approval for all off-site transfers prior to any off-site shipment.

In general, W-T-E vendor approvals last for several years unless the waste stream changes appreciably. However, generators must ensure that all non-hazardous wastes meet acceptance criteria prescribed by the receiving facility.
- The waste generator must place approved non-hazardous waste(s) in an appropriate container(s) that is not leaking and is compatible with the material being handled.. This is necessary in order to prevent any spills/releases into the environment. In some cases, drum liners (compatible with the wastes) or lined metal drums may be necessary. Contact the WMR or ECR for guidance before placing bulk wastes into a waste container.
- Clearly label the contents of wastes on the shipping container--list chemical names and do NOT use tradenames.
 - Labels for off-site transfers must comply with applicable Department of Transportation and NYS Department of Environmental Conservation regulations, if applicable.
 - Labels must also conform with any third party vendor's approval process that may include the following: approval number/designation, generator's name, generator's address, type of waste, and any other vendor required information.

Note: Waste that is not properly labeled or does not match the vendor's requirements may not be shipped.

- All waste **containers** must meet applicable U.S. Department of Transportation requirements and must, minimally and if in non-bulk containers, be secured against movement.
- Ensure the following when shipping Used Oil off-site:
 - A nonhazardous manifest or bill of lading must accompany each shipment. (**Note:** Some states, such as Connecticut, require a nonhazardous state manifest for nonhazardous shipments and only properly trained personnel may sign the shipping document.)
 - An inventory that lists the source of the Used Oil and the type of Used Oil must be attached to the manifest or bill of lading.
 - A properly permitted (e.g., 6NYCRR Part 364 and any other state and/or local permits) nonhazardous waste hauler must transport the

waste from BNL to the off-site facility.

- Each special waste delivery must be scheduled appropriately with the third-party receiving Waste-To-Energy facility and must meet the acceptance criteria of the vendor.

7. Sharp Object Wastes - Non-Medical, Non-Hazardous [^back to top](#)

Non-medical sharp objects include glass/broken glass/glass with sharp edges*; Exacto blades; razor blades; equipment probes/prongs; automotive brake tools with sharp points; empty epoxy applicators with sharp points; and other objects not resembling medical/medically-associated devices. See also the exhibit [Disposal of Sharps](#) for more details.

1. Before waste is generated, the Responsible Individual/Waste Generator reviews pollution prevention and waste minimization techniques to minimize waste generation, and ensures proper management of waste that cannot be avoided.
 - During project-planning phases, identify any project wastes, emissions or effluents, and obtain any required permits. See the [Work Planning and Control for Experiments and Operations](#) Subject Area.
 - Apply technically feasible and economically practical pollution prevention or waste minimization techniques. See the [Pollution Prevention and Waste Minimization](#) Subject Area.
2. The Responsible Individual/Waste Generator must ensure that the above non-medical and non-hazardous sharps are rendered safe for handling to prevent injuries to employees (e.g., use of: a yellow industrial sharps box, a sturdy container that will not allow for sharp penetrations, an Ice Cream Container-ICC, an "Ecolo-bag" or equivalent for accumulation). Then the waste may be handled as municipal trash. Chemically contaminated sharp objects, such as epoxy applicators, must be handled as Hazardous Waste through the Waste Management Division. Contact the [Waste Management Representative](#) or [Environmental Compliance Representative](#) for guidance. See also the exhibit [Disposal of Sharps](#) for more information.
3. *If glass contains a chemical, then it must be properly cleaned according to the [How Do I Manage this Waste Stream?](#) Web site.

Guidelines

When in doubt, manage the waste conservatively, in accordance with the requirements of the [Hazardous Waste](#) section, and allow the Environmental Protection Division to make the ultimate determination on whether the waste is hazardous, based on the information provided by the generator and any analytical data.

Refer to the [How Do I Manage this Waste Stream?](#) Web site for additional guidance on managing a variety of waste streams. (**Note:** Your [Waste Management Representative](#) or [Environmental Compliance Representative](#) can assist in the management of these types of waste streams.)

Refer to the exhibit [Hazardous Waste Generator Characterization Guidance](#) to aid in determining whether waste should be managed as hazardous waste.

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