

Workers whose actions have the *potential* to effect the environment should be familiar with the following information. This information supplements existing Laboratory training courses that were identified as requirements in JTAs and Experiment Safety Reviews (ESRs). The EMS program identifies environmental aspects of work at BNL, develops and implements controls for those aspects. Workers must be aware of potential impacts, consequences and the actions they can take to prevent them. The EMS also provides mechanisms to aid in the identification of pollution prevention opportunities and associated cost savings measures. Read the rest of this section, then select the links relevant to the work you do.

Roles and Responsibilities

As a worker whose work has the potential to impact the environment, your role is to perform your work diligently and in compliance with environmental policy and procedures and the EMS, and to help in developing controls, plans and procedures to prevent those impacts from occurring. Your responsibilities include understanding those potential impacts, identifying and exploring pollution prevention opportunities in your work. Your responsibility is to carry out your work according to plans and procedures, to review work and suggest improvements, and to immediately take actions and report any incidents to minimize their impact.

Impacts

The primary environmental impact is damage to the environment that could result from the mishandling of chemicals and other hazardous materials, either through accidental spills, improper handling, or improper disposal methods. Potential pathways to the environment should be considered before beginning work. Chemicals and hazardous materials should always be handled carefully. Disposal methods should be reviewed and funded pathways established before working. Sink disposal is forbidden unless a chemical is listed on the posted sink releasable chemicals list.

Consequences

Failure to control the environmental aspects of your work can result in damage to the environment, which, along with other noncompliance issues that are violations of Federal, State and Local regulations, can result in severe fines to the Laboratory. In cases of gross negligence, individuals can be fined or imprisoned. Fines represent a real monetary loss to the Laboratory that affects all of our programs and injures our relationship with neighbors and stakeholders.

Benefits

For information only.

Establishment of an EMS helps to protect the environment and demonstrates to the Laboratory's stakeholders that we have made a serious and continuing commitment to protecting the environment and improving our work processes. Performing our work diligently and in accordance with ESRs and Work Plans is the best way, as individuals, to demonstrate this commitment. The EMS also provides a framework for identifying pollution prevention measures and perhaps cost reductions.

Emergency Response

If you observe a spill, or other event that impacts the environment, take immediate action to limit the impact. Use your judgment on your ability to limit the occurrence. You should be confident that you are taking the correct action and that you are not endangering yourself or others, or making the incident worse. Then, call 2222 or 911 to summon professional help and report the incident. Also call your supervisor and the Department ESSH Coordinator.

Pollution Prevention and Waste Minimization

BNL recognizes the importance of pollution prevention and waste minimization, and has included them as additional elements in its EMS. Look for ways to reduce the amount of waste of all types that your work generates. Avoid stockpiling materials, especially those with expiration dates. Pollution prevention also applies to conservation of natural resources. Discuss any ideas related to pollution prevention and waste minimization with your coworkers and supervisor, or your ESSH Coordinator.

Training

BNL provides a wide range of training courses to help you perform your work in a safe and environmentally responsible fashion. If there are courses that would help you to carry out your responsibilities, take those courses. If there are courses that you feel that BNL should offer, or improve, consult your Training Coordinator.

Controls and Procedures

[I Work in a Hazcom Area \(Non-hazardous Chemical Use\)](#)

[I Work in a Lab Standard Area](#)

[I am a Hazardous Waste Generator](#)

[I am a Radioactive Waste Generator](#)

[I Work in a Machine Shop](#)

[Recycling Waste Solder](#)

For information only.

I Work in a Hazcom Area (Non-hazardous Chemical Use).

The primary control is proper labeling and storage of chemical containers and understanding the disposal path for each chemical that you use. Use secondary containment where leaks or spills have a direct path to the environment. If your work generates hazardous waste, you must take Hazardous Waste Generator Training.

I Work in a Lab Standard Area.

The primary control is the proper labeling, storage and handling of chemicals and chemical containers. Understand where pathway to the environment can occur in your workplace. Use secondary containment for all chemical containers. If your work generates hazardous waste, you must take Hazardous Waste Generator Training.

I am a Hazardous Waste Generator.

Maintain the controls as described in the [Hazardous Waste Management Subject Area](#). Keep waste in closed containers that are compatible with the contents. Keep waste types appropriately segregated and use secondary containment. Waste containers must be labeled with a Hazardous Waste Label that identifies the contents. When containers are full, fill out a Hazardous Waste Control Form and take the container to the 90-Day Accumulation Area.

I am a Radioactive Waste Generator.

If you are going to generate any radioactive waste, follow the [Radioactive Waste Management Subject Area](#) and notify the RCD FSS Representative *before* you generate the waste. The waste will be moved to the Department's radioactive waste accumulation area as soon as you have finished your work. All work that generates radioactive waste must be described in an RWP attached to the ESR. The only exception to this is if the waste is generated accidentally, for example, if a sealed source breaks open or is found to be leaking.

Recycling Waste Solder.

Waste solder from electronics repair and assembly operations is typically composed of tin/lead or tin/silver solder. Waste solder should be collected in a container labeled

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"Solder Scrap for Recycling". A single container located in the vicinity of the soldering operations should suffice. When solder stations are cleaned, waste solder should be emptied to the labeled container. When the container is full, it can be brought to the Department's 90-Day Accumulation Area Manager for proper disposition.

IF solder wastes are NOT recycled, then they must be managed as Hazardous Wastes due to lead or silver content. A single [Satellite Accumulation Area](#) located in the vicinity of the soldering operations should suffice. The container must be labeled with a Hazardous Waste label, including a description of the contents, and must be maintained closed except when adding or removing waste. When full complete a Hazardous Waste Control Form and move the container to the 90-Day Accumulation Area for pick up by waste management personnel.

I Work in a Machine Shop

Failure to follow the rules below may result in contamination of the environment, non-compliance with environmental and/or safety regulations, fines, penalties, Notice of Violations, or warnings from governmental entities and/or disciplinary action from BNL management personnel. Individuals working in these shops are responsible for operating the equipment and using the materials in a safe manner without damaging the environment.

Shop Operators must follow these rules:

Oils and hazardous wastes

- Oily rags must be disposed of in the designated oily rag container(s) for disposal as industrial waste (see [Industrial Waste](#) SBMS Subject Area)
- Used oil must be collected for disposal as industrial waste. (*Note: this waste may be stored in a satellite accumulation area-SAA. Details on SAA's can be found in the applicable Subject Area for hazardous wastes [Hazardous Waste Management](#) or you may contact the ESSH Coordinator for further information.*)
- Hazardous wastes (e.g. solvents, chemicals, aerosol cans that are not empty, etc.) generated must be handled as per the above Subject Area. Contact the ESSH Coordinator for further information.
- Spills of chemicals and/or oils must be cleaned up safely and promptly. Reportable spills must be promptly called in to the Safeguards & Security and the Fire/Rescue Group (x 2222 or 911). Refer to the SBMS Subject Area: [Spill Response](#).

Machining restrictions:

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- Machining or any activity generating beryllium dust is NOT permitted;
- Machining or any activity with asbestos-containing materials, such as G10, that generates dust is not permitted;
- Machining or any activity generating lead particles requires the approval of the ESSH Coordinator (refer to the [Lead Machining and Fabricating](#) Subject Area) or call the ESSH Coordinator if there are any questions.