

# **Best Management Practices BMP Manual**



## **Minimum Required BMPs When Operating at Port Authority Public Facilities**

<b>Date:</b>	July 21, 2016
<b>Revision No.:</b>	1
<b>Prepared By:</b>	Environmental Planning and Compliance Department
<b>Approved By:</b>	Director of Environmental Planning and Compliance
<b>Distribution:</b>	Port Authority Customers

# Table of Contents

**PURPOSE:** The purpose of this manual is to provide general guidance on the Best Management Practices (BMP's) that should be employed at a minimum when working in the Port area to reduce the contribution of pollutants to the environment from our operations and activities.

**PROCEDURE:** Companies working in the Port area are responsible for utilizing the applicable BMP's to their specific operations and activities.

**ATTACHMENTS:**

- BMP 1.0 Blasting & Surface Preparation
- BMP 2.0 Vehicle & Equipment Cleaning
- BMP 3.0 Preventative Maintenance
- BMP 4.0 Good Housekeeping
- BMP 5.0 Painting & Surface Coating
- BMP 6.0 Material Handling & Storage
- BMP 7.0 Storage Tanks & Containers
- BMP 8.0 Fueling
- BMP 9.0 Used Battery Management
- BMP 10.0 Spill Response & Notification
- BMP 11.0 Spill Prevention
- BMP 12.0 Spill Cleanup
- BMP 13.0 Outdoor Equipment Operations
- BMP 14.0 Bulk Material Handling
- BMP 15.0 Material Handling Dock Cleanup
- BMP 16.0 Air Emissions – Diesel
- BMP 17.0 Pesticide Use
- BMP 18.0 Street Sweeping
- BMP 19.0 Fabrication & Welding
- BMP 20.0 Electrical Consumption Reduction

## **BMP 1.0 Blasting & Surface Preparation**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by blasting and surface preparation operations. Surface preparation includes such activities as buffing, dry abrasives blasting, and water jetting, which prepare the surface of metal, wood, plastic, porcelain and other materials for coating with primer, paint and rust preventative. These activities could contribute such pollutants as paint, metal contaminants, and blasting media to storm water runoff.

### **PROCEDURES:**

- Obtain appropriate air authorization with TCEQ for blasting operations prior to commencing. Provide a copy of permit to Port Authority Environmental Planning & Compliance Department.
- Submit blasting plan to Port Authority for prior approval. Plan should include details on containment and waste disposal.
- Enclose, cover and contain blasting activities.
- Blast only when the wind direction and speed minimizes impacts to surrounding receptors.
- Take all reasonable precautions to prevent particulate matter from becoming airborne.
- Store, handle, and manage abrasives and spent materials in a manner that prevents or minimizes it from blowing offsite or creating a nuisance.
- Handle and move spent materials in a way that prevents extraneous dust and loss of materials until it is disposed of properly.
- Collect spent materials in proper containers.
- Maintain and keep all emission control equipment in proper working condition and in use during blasting operations.
- When using dry abrasive blasting material, take precautions to prevent from reaching the water.

# **BMP 1.0 Blasting & Surface Preparation**

**RECORD KEEPING:**

Painting and Blasting Record

**OTHER BMPs TO REFERENCE:**

- BMP 3.0 Good Housekeeping
- BMP 4.0 Painting & Surface Coating
- BMP 5.0 Preventative Maintenance
- BMP 6.0 Material Handling & Storage
- BMP 13.0 Outdoor Equipment Operations

## **BMP 2.0 Vehicle & Equipment Cleaning**

**PURPOSE:** The purpose of this BMP is to ensure that wash water from vehicle and equipment cleaning does not contribute pollutants directly to the environment and indirectly through storm water runoff.

**PROCEDURE:**

- Vehicle and equipment cleaning operations are strictly prohibited on public docks and laydown areas.
- On a case by case basis and with prior approval from the Director of Environmental Planning & Compliance, approval may be granted for vehicle and equipment cleaning operations. Approval will require a containment plan and demonstration of appropriate permitting.
- APHIS cleaning operations are exempted but require a full containment plan which must be approved by the Director of Environmental Planning & Compliance
- The Port Authority maintains containment infrastructure at Public Cargo Docks. It must be utilized in accordance with procedures and requires Port Authority approval prior to use.
- Do not conduct oil changes and other engine maintenance in the designated washing areas.

**OTHER BMP'S TO REFERENCE:** BMP 3.0 Good Housekeeping  
BMP 8.0 Fueling  
BMP 11.0 Spill Prevention

## **BMP 3.0 Good Housekeeping**

**PURPOSE:** The purpose of this BMP is to promote efficient and safe housekeeping practices that aid in preventing pollutant discharges to the environment.

**PROCEDURES:**

- Keep work sites clean and orderly. Remove debris in a timely fashion. Sweep the area regularly.
- Properly collect wash water, sweepings, sediments, and wastes. Responsible party will properly dispose of all wastes.
- Properly collect fluids for recycling or disposal.
- Port dumpsters and trash barrels are only to be used for non-regulated wastes.
- Maintain an inventory of products ordered, used, and spills that occur.
- Have spill cleanup materials readily available and in a known location.
- Clean up spills immediately. Notify the Port Police Department immediately at (361) 882-1182 of any spills that occur.
- Use equipment and materials properly.
- Remove scrap metal, wood, plastic, trash, paper, glass welding rods, etc. from the yard area.
- Collect sweepings of dust, dirt, and debris accumulated from facility cleanup and properly dispose of in trash receptacle. Do not blow accumulated materials and do not create nuisance airborne dust. Properly dispose of or recycle spent shavings and grinding dust.

**COPY**

## **BMP 3.0 Good Housekeeping**

**RECORD KEEPING:**

Bill of Lading  
Manifests

**OTHER BMP'S TO REFERENCE:**

BMP 6.0 Material Handling & Storage

## **BMP 4.0 Painting & Coating**

**PURPOSE:** The purpose of this BMP is to minimize the environmental impacts that could occur during painting and surface coating activities. Surface coating and painting operations are the application of decorative or protective materials or paints in liquid or powder form. These coatings may include general solvent type paints, varnishes, lacquers, and water thinned paints. These can contribute pollutants in the form of air emissions.

### **PROCEDURES:**

- Rolled and brushed on painting and coating should be done using drop clothes.
- If sprayed on paints or coatings are to be used, submit painting plan to Port Authority Director of Environmental Planning & Compliance for prior approval. Plan should include details on containment, waste disposal, and TCEQ air permit authorization.
- Enclose, cover and contain painting and coating activities to prevent over-spray from reaching waters.
- Mix paints and solvents in designated areas away from drains, ditches and surface waters.
- Have absorbent or other cleanup materials readily available for immediate cleanup of spills.
- Keep lids on containers of solvents and paints to prevent evaporation of volatile organic compounds to the atmosphere.
- Use high-volume, low-pressure (HVLP) paint spray guns instead of conventional spray guns.
- Use enclosed wash units to clean paint equipment.
- Install a proportioner on the spray equipment for dual component coatings such as epoxies and polyurethanes.
- Use high solid/low volatile organic compound (VOC) paints.
- Use water-based coatings to minimize emissions.



## **BMP 4.0 Painting & Coating**

- Use suggested air pressure and tip sizes for the specific product and equipment being used.
- Use application methods that provide the most coverage and the least overspray or over application.
- When mixing paint colors, only mix the amount of color needed for that specific job.
- Save cleanup solvent to use later as thinner for paint of the same color.
- Return expired unused coating and solvent to the distributor or manufacturer instead of collecting for disposal.
- Properly dispose of paint waste and do not dispose in Port Authority trash receptacles.

**RECORD KEEPING:**

Painting & Coating Record  
Manifests

**OTHER BMPs TO REFERENCE:**

BMP 1.0 Blasting & Surface Preparation  
BMP 3.0 Good Housekeeping  
BMP 6.0 Material Handling & Storage  
BMP 10.0 Spill Response & Notification  
BMP 11.0 Spill Prevention  
BMP 12.0 Spill Cleanup  
BMP 13.0 Outdoor Equipment Operations

# **BMP 5.0 Preventative Maintenance**

**PURPOSE:** The purpose of this BMP is to promote efficient and safe preventative maintenance practices that aid in preventing pollutant discharges to the environment. Engine repair and services, replacement of fluids, and outdoor equipment and storage and parking can impact water quality if storm water runoff from areas with these activities becomes polluted by a variety of contaminants. Implementation of these best management practices will prevent or reduce the discharge of pollutants to storm water from vehicle and equipment maintenance and repair activities.

## **PROCEDURES:**

- Vehicles and equipment maintenance and repairs are strictly prohibited on Port Authority public docks and facilities.
- Only well maintained vehicles and equipment free of leaks and drips should be used at Port Authority public docks and facilities.
- Vehicles and equipment found leaking on Port Authority property will be required to be moved and will not be allowed back on Port Authority property until verification of repairs is made.

## **OTHER BMPs TO REFERENCE:**

BMP 3.0 Good Housekeeping  
BMP 10.0 Spill Response & Notification  
BMP 11.0 Spill Prevention  
BMP 12.0 Spill Cleanup  
BMP 13.0 Outdoor Equipment Operations

## **BMP 6.0 Material Handling & Storage**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by material storage.

### **PROCEDURES:**

- Material handling and storage of liquids at Port Authority public dock and facilities must be approved by Port Authority Director of Environmental Planning & Compliance prior to use.
- Store containerized materials (fuels, paints, solvents, waste oil, anti-freeze, batteries) in a protected, secure location away from drains and plainly labeled.
- Have absorbent or other cleanup items readily available for immediate cleanup of spills in storage areas.
- Keep an up-to-date inventory of the materials delivered and stored on-site.
- Outside stored materials should be covered with tarps or roof to prevent exposure to storm water runoff.
- Conduct periodic inspections of storage and containments for leaks or potential problems.
- Minimize inventory of raw materials.
- Dispose of expired, unused materials accordingly or return to distributor or manufacturer, if possible.
- Unload materials in dry weather when possible.
- Store drums and containers holding liquids in containment that is at least 10% larger than the total volume of the drum and containers.

**COPY**

# **BMP 6.0 Material Handling & Storage**

**RECORD KEEPING:**

Product Inventory

**OTHER BMPs TO REFERENCE:**

- BMP 3.0 Good Housekeeping
- BMP 8.0 Fueling
- BMP 9.0 Used Battery Management
- BMP 10.0 Spill Response & Notification
- BMP 11.0 Spill Prevention
- BMP12.0 Spill Cleanup

## **BMP 7.0 Storage Tanks & Containers**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by product and waste inventories maintained in storage tanks and containers. Accidental releases from product and waste storage areas potentially impact soil and groundwater quality and have the potential to impact storm water runoff. Many potential pollutants are present such as fuels, greases, lubricants, waste oils, solvents, and anti-freeze.

### **PROCEDURES:**

- Storage tanks and storage areas must be approved by Port Authority personnel prior to use.
- Utilize secondary containment systems.
- Storage of oil products and fuels may require a Texas General Land Office Certificate. If such certificate is required, a copy must be presented to Port Authority.
- Keep drain valves on containments closed and locked.
- Conduct routine inspections and check for external corrosion of containers and tanks. Inspect the secondary containment system for leaks, cracks, or other signs of damage that compromise the integrity of the containment system.
- Check for failure of piping systems (pipes, pumps, flanges, couplings, hoses, and valves).
- Have an employee present during all fueling or fuel transfer operations.
- Take precautions to prevent leaks or spills during pumping of liquids or gases.
- Place drip pans at all mounted container taps, and at all potential drip and spill locations during filling and unloading of containers or tanks. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed of.
- Spills should be immediately responded to and cleaned up. Notify the Port Police Department immediately at (361) 882-1182 of any spills that occur.
- Responsible party will ensure appropriate spill and clean up materials are stored and maintained in a location near the tank and container storage areas.

## **BMP 7.0 Storage Tanks & Containers**

- Responsible party will train employees in emergency spill cleanup procedures.
- Place tight fitting lids on all containers and properly label the contents of storage tanks and containers.
- Use proper storage containers that are adequately designed to hold and compatible with the contents to be stored.
- Sweep and clean the storage areas regularly if it is paved and do not hose down the area to a storm drain.
- Do not discharge storm water from secondary containment unless it is free from physical evidence of pollution such as oily sheen, discoloration, turbidity or excessive odor. Document discharges of storm water from secondary containment.

### **RECORD KEEPING:**

Product Inventory  
Product Invoices  
Discharge Records

### **OTHER BMPs TO REFERENCE:**

BMP 3.0 Good Housekeeping  
BMP 6.0 Material Handling & Storage  
BMP 10.0 Spill Response and Notification  
BMP 11.0 Spill Prevention  
BMP 12.0 Spill Cleanup

## **BMP 8.0 Fueling**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by fueling operations. Spills during fuel transfer operations and from product storage can contribute hydrocarbon contamination to the environment and pollutant exposure to storm water runoff.

### **PROCEDURES:**

- Handle the fueling nozzle vertically to prevent spilling fuel.
- Help prevent rupturing by not stretching the hose.
- Prevent spills/overflows by maintaining an employee at the pump during fuel transfer.
- Keep absorbent or cleanup kit readily available in case of a spill.
- Know where the pump shut off is located.
- Report all spills promptly to the Port Authority Police Department at (361) 882-1182
- Immediately repair faulty fueling equipment. (e.g. damaged hoses, nozzles )
- No open flames while fueling.

### **OTHER BMPs TO REFERENCE:**

BMP 3.0 Good Housekeeping  
BMP 6.0 Material Handling & Storage  
BMP 10.0 Spill Response and Notification  
BMP 11.0 Spill Prevention  
BMP 12.0 Spill Cleanup  
BMP 13.0 Outdoor Equipment Operations

## **BMP 9.0 Used Battery Management**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by storing used lead-acid batteries for disposal. Pollutants can be contributed to storm water through exposure of storm water runoff to the stored used batteries.

### **PROCEDURES:**

- All spent batteries should be properly disposed of and not left or stored on Port Authority property.

### **OTHER BMPs TO REFERENCE:**

BMP 3.0 Good Housekeeping  
BMP 6.0 Material Handling & Storage  
BMP 10.0 Spill Response & Notification  
BMP 11.0 Spill Prevention  
BMP 12.0 Spill Cleanup



## **BMP 10.0 Spill Response & Notification**

**PURPOSE:** The purpose of this BMP is to ensure an immediate response to spills to minimize the contribution of pollutants to the environment caused by spills.

**PROCEDURES:**

- Responsible party must make all necessary State, Federal, and local notifications for reportable quantity spills, as required by law.
- Responsible party must also notify the Port Police (882-1182) for all spills and relay information about the substance type and quantity spilled, the location and time of the release, the nature of any response actions taken, and the size of area impacted or potentially impacted.

**OTHER BMPs TO REFERENCE:**

BMP 3.0 Good Housekeeping  
BMP 10.0 Spill Prevention  
BMP 11.0 Spill Cleanup

# **BMP 11.0 Spill Prevention**

**PURPOSE:** The purpose of this BMP is to prevent spills that may occur during regular activities and operations.

**PROCEDURES:**

- Visually inspect storage tanks and containment areas regularly to identify potential problems or leaks.
- Use drip pans whenever transferring liquids from one container to another.
- Storage tanks and containers containing liquids should be placed inside containment that is capable of holding an amount 10% greater than the total capacity of the largest container.
- Keep valves on containment systems closed in case of puncture or rupture.
- Responsible party should maintain necessary spill response kits and equipment for the operations and ensure that employees are familiar with use. After a storm event, observe storm water in containments for evidence of pollutants. If no pollutants are visible then drain the storm water from the containment. Be sure to close valves after draining is completed. If evidence of pollutants is present, do not drain the storm water from the containment, responsible party will contract for proper disposal.

**OTHER BMPs TO REFERENCE:**

BMP 3.0 Good Housekeeping  
BMP 9.0 Spill Response & Notification  
BMP 11.0 Spill Cleanup

## **BMP 12.0 Spill Cleanup**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by spill cleanup activities. Cleanup actions in response to a spill could potentially contribute pollutants and sediments to storm water runoff.

**PROCEDURES:**

- Do not leave absorbent material lying on the ground after cleanup of a spill has been completed. Left absorbent material will be picked up in storm water runoff.
- Responsible party will arrange for disposal of collected materials.
- Do not use emulsifiers or dispersants to clean spills up.

**OTHER BMPs TO REFERENCE:**

BMP 3.0 Good Housekeeping  
BMP 9.0 Spill Response & Notification  
BMP 10.0 Spill Prevention

## **BMP 13.0 Outdoor Equipment Operations**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by outdoor equipment operations. The operation of outdoor equipment can contribute pollutants to the environment in the form of air emissions, oils, grease and fuels exposed to storm water runoff, and from spills that could occur during use of the outdoor equipment.

### **PROCEDURES:**

- Conduct routine preventive maintenance of vehicles and equipment prior to bringing or using at public Port Authority docks and facilities, including checking equipment for leaks.
- Inspect vehicles and equipment routinely for leaks or problems.

### **OTHER BMPs TO REFERENCE:**

BMP 5.0 Preventative Maintenance  
BMP 10.0 Spill Response & Notification  
BMP 11.0 Spill Prevention  
BMP 12.0 Spill Cleanup  
BMP 16.0 Air Emissions – Diesel

## **BMP 14.0 Bulk Material Handling**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by bulk material handling operations. During loading and unloading operations, materials spilled, leaked or lost may collect in the soil or on other surfaces and have the potential to be carried away by storm water runoff or when the area is cleaned. Additionally, rainfall may wash pollutants from the machinery used to unload or move materials.

### **PROCEDURES:**

- Use water-sprinkling system when handling bulk materials to minimize dust.
- Use ship to dock drapes to prevent spillage of material during loading.
- Utilize covered storage and conveying systems when possible to minimize dust.
- Materials from spills and cleanup activities should be reclaimed as product and recycled to the owner.
- Do not handle during high wind conditions.
- Protective measures should be taken to ensure bulk materials don't get into Port Authority storm drain systems.
- Remove accumulation of materials on docks daily to prevent windblown dust.

### **OTHER BMPs TO REFERENCE:**

BMP 3.0 Good Housekeeping  
BMP 6.0 Material Handling & Storage  
BMP 15.0 Material Handling Dock Cleanup

## **BMP 15.0 Material Handling Dock Cleanup**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by cleanup of bulk material handling operations. During loading and unloading operations, materials spilled, leaked or lost may collect in the soil or on other surfaces and have the potential to be carried away by storm water runoff or when the area is cleaned.

### **PROCEDURES:**

- Dropped bulk material and material from cleanup activities should be reclaimed as product and recycled to the owner. Reclaimed material should be placed in the last railcar or truck, on the ship, or on the appropriate responsible party's stockpile. Excess material should not be stockpiled onsite.
- Dock facilities must be completely cleaned up after each unloading event. Accumulations should be removed daily during material handling operations.
- Use water for wash down and street sweeping to minimize dust.

### **OTHER BMPs TO REFERENCE:**

BMP 3.0 Good Housekeeping  
BMP 6.0 Material Handling & Storage  
BMP 14.0 Bulk Material Handling

## **BMP 16.0 Air Emissions - Diesel**

**PURPOSE:** The purpose of this BMP is to minimize potential for diesel emissions from operation of vehicles and equipment. Air emissions from diesel powered vehicles and equipment contribute to the regional air quality. Smoking vehicles and equipment significantly impact the air pollution levels in our community.

### **PROCEDURES:**

- Conduct preventative routine maintenance on vehicles and equipment to keep them well maintained and in good working condition.
- Don't idle vehicles and equipment when on standby for more than five minutes.
- Carpool to and from job sites using vehicles or work trucks for transportation for breaks or errands. Don't use equipment for transportation for breaks or errands.
- Utilize ultra low-sulfur diesel whenever possible.
- Inspect vehicles and equipment routinely for leaks or problems.

**OTHER BMPs TO REFERENCE:** BMP 13.0 Outdoor Equipment Operations

# BMP 17.0 Pesticide Use

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment and degradation of water quality caused by the use of pesticides.

## **PROCEDURES:**

- Use the chemical properly and in the quantities specified on the product labeling or MSDS. Use measuring cups to ensure proper quantity is used.
- Don't use chemicals or chemical mixtures that counteract the intended effect of each chemical being used.
- Monitor the product inventory including quantity used, received and disposed of.
- Utilize non-chemical methods or less hazardous chemicals when appropriate. Utilize broader spectrum chemicals when applicable instead of using multiple chemicals.
- Immediately cleanup any spills that occur and properly dispose of the materials.
- Use proper health and safety equipment and procedures to prevent human exposure.
- Properly store chemicals in labeled containers.
- Utilize contracted professionals when necessary to treat problem areas.
- Identify and apply pesticide to the main nest to eliminate the problem at the source.

## **RECORD KEEPING:**

Pesticide Inventory Form  
Spill Response Inventory

## **OTHER BMPs TO REFERENCE:**

BMP 3.0 Good Housekeeping  
BMP 6.0 Material Handling & Storage  
BMP 10.0 Spill Response & Notification  
BMP 11.0 Spill Prevention  
BMP 12.0 Spill Cleanup



## **BMP 18.0 Street Sweeping**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by street sweeper operations. Street sweeper operations can contribute pollutants to the environment in the form of air emissions, oils, grease and fuels exposed to storm water runoff, and from spills that could occur during the use of street sweepers.

### **PROCEDURES:**

- Ensure street sweeping equipment is in good working order prior to bringing on or using at Port Authority public docks and facilities.
- Use wet brush methods when conducting cleaning with a sweeper.
- Properly handle and dispose of street sweepings.
- Ensure that all personnel are properly trained and qualified to conduct street sweeper operations.

### **OTHER BMPs TO REFERENCE:**

BMP 10.0 Spill Response & Notification  
BMP 11.0 Spill Prevention  
BMP 12.0 Spill Cleanup  
BMP 13.0 Outdoor Equipment Operations

## **BMP 19.0 Fabrication & Welding**

**PURPOSE:** The purpose of this BMP is to minimize the contribution of pollutants to the environment caused by fabrication and welding operations. Fabrication and welding activities are potential sources of air and storm water pollution due to the use of harmful substances such as solvents, paints, and VOC emissions that are generated during the process.

### **PROCEDURES:**

- Use appropriate PPE and conduct welding operations in a well-ventilated area.
- Remove all paint, solvent, grease, or residue from surface prior to welding.
- Use wire welding over shielded metal-arc welding whenever possible as it has lower emissions. If shielded metal-arc welding is required use low-fume electrodes/sticks.
- Use pulse method which has a lower fume generation rate than steady method.
- Use lowest acceptable voltage by maintaining the welding angle close to perpendicular.
- Don't over weld.
- Properly dispose of all scrap metals, spent welding rods, and materials removed during surface preparation.

### **OTHER BMPs TO REFERENCE:**

BMP 1.0 Blasting & Surface Preparation  
BMP 3.0 Good Housekeeping  
BMP 4.0 Painting & Surface Coating  
BMP 6.0 Material Handling & Storage  
BMP 7.0 Storage Tanks & Containers

**COPY**

## **BMP 20.0 Electrical Consumption Reduction**

**PURPOSE:** The purpose of this BMP is to conserve natural resources and reduce environmental footprint through the reduction in the amount of electricity consumed Port wide.

**PROCEDURES:**

- Turn off electrical equipment when not in use.
- Notify Port Authority staff when overhead lights are left on in Port area.

**OTHER BMPs TO REFERENCE:**       None