

# **ENVIRONMENTAL BEST MANAGEMENT PRACTICE**

## **BMP No. 321**

### **Secondary Containment & Sumps for Tanks & Containers Containing Hazardous Substances**

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#### **WHAT IS SECONDARY CONTAINMENT?**

Any dike, containment curb, pit, or other barrier, which provides containment for the contents of the single largest container plus ten percent freeboard to allow for precipitation. The base must provide support and underlie the container and be free of cracks or gaps and it must be sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.

#### **WHAT IS A BULK STORAGE TANK?**

A stationary device designated to contain accumulation of liquid, gas or solid substance. Tanks are primarily constructed of non-earthen materials (e.g.; wood, concrete, steel, plastic) that provide structural support.

#### **WHAT IS A SUMP?**

Sumps are commonly associated with secondary containment or process/wash water collection systems in the concentrators. Sumps in secondary containment structures are typically located in the low areas of secondary containment to collect the majority of small spills and to allow a pump to be placed in the containment to remove collected materials. Sumps in the concentrators are typically located in the lower levels of the plants and are permanently equipped with pumps to pump water and solids back into the process.

#### **WHAT IS A CONTAINER?**

Any portable device, in which a material is stored, transported, or otherwise handled, this includes drums, totes and other similar containers.

#### **WHAT IS A HAZARDOUS SUBSTANCE?**

Hazardous substances are defined by regulatory programs managed by EPA, DOT and other agencies. Contact Environmental Services for assistance in determining which materials are hazardous substances.

#### **WHAT ARE THE GENERAL GUIDELINES FOR BULK STORAGE TANKS, SECONDARY CONTAINMENT SYSTEMS AND SUMPS?**

- All projects and revisions should be submitted through Management of Change (MOC) for approval
- Notify Environmental Services at least one month prior to all projects that involve construction, repair or closure of any tank, secondary containment system, or sump to determine criteria to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water.
- No tank, secondary containment system, sump, or their ancillary equipment should be constructed out of a material that is not compatible with the substance stored in the system.

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- Secondary containment requirements are intended to address the most likely discharge from bulk storage containers.

#### **WHAT ARE THE SPECIFIC BULK STORAGE TANK GUIDELINES?**

- All bulk storage tank installation and ancillary equipment should be constructed so that a means of secondary containment is provided. **See secondary containment guidelines below.**
- All new tanks permanently located shall be constructed on a concrete pad and foundation to prevent corrosion at the soil/tank interface and to provide a secure foundation for the new tank.
- Tanks used in the Mine that are moved on a periodic basis should have a skid built under the tank to prevent corrosion at the soil/tank interface.
- Spills resulting from overfilling, a leak, or damage to a tank must be contained and cleaned up immediately under the direction of Environmental Services.

#### **WHAT ARE THE SPECIFIC CONTAINER STORAGE GUIDELINES?**

- All containers should be stored indoors, if possible.
- If storing containers indoors is not possible, they must be stored following the guidelines outlined in **Best Management Practice No. 313 – Drum and Container Management.**

#### **WHAT ARE THE SPECIFIC SECONDARY CONTAINMENT GUIDELINES?**

- All secondary containment systems must have sufficient capacity to contain 110% of the volume of the largest single container which is intended to address a major failure associated with bulk storage containers.
- The base of a secondary containment must be sloped or otherwise designed and operated to allow materials resulting from leaks, spills, or precipitation to be easily evacuated.
- Precipitation run-off into the containment system must be prevented to minimize commingling of materials.
- Visual inspections should be performed on a periodic schedule of all secondary containment systems and the area immediately surrounding the externally accessible portion of the system.

#### **WHAT ARE THE GUIDELINES FOR RAINWATER DRAINAGE FROM A SECONDARY CONTAINMENT SYSTEM?**

- Each area shall have a designated person(s) who is responsible for ensuring that rainwater accumulated in secondary containment structures is evacuated after a precipitation event.
- Before rainwater removal, the containment shall be inspected to ensure no contaminants have leaked from the tank. If contaminants are present, call Environmental Services for guidance. Environmental Services will assist you in following the guidelines and removal of contaminants must be in a timely manner.
- In the case of petroleum storage tanks, the inspector shall look for a visible sheen on the water. If a visible sheen is present, operator must place absorbent booms into the containment to remove all sheen prior to evacuation of the captured water. In the case of acidic or basic substances, the pH of the water shall be measured. If the pH is below 3 or greater than 11, contact Environmental Services for guidance on the disposition of contaminant and evaluation of bulk storage tank. If pH is in compliance, the operator may continue to drain the containment.

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- Water and materials captured by secondary containment should be evacuated as soon as practicable
- Records of all rainwater and contaminated liquid removals shall be maintained with the date of removal and the signature of the responsible personnel. Completed forms shall be forwarded to the Environmental Services Department for filing.

**WHAT ARE THE GUIDELINES FOR SUMPS?**

- Sumps must not be constructed without prior approval through the Management of Change (MOC) process.
- Sumps in secondary containment systems must be kept empty.
- Sumps that collect “regulated substances” during emergency releases or spills must be cleaned within 48 hours of an event.
- Sumps must be visually inspected on a periodic schedule.
- All sumps must have a capacity of less than 110 gallons.

**WHAT SHOULD BE DONE IN CASE OF A RELEASE OR SPILL?**

All spills and releases must be reported to Environmental Services Department immediately upon being discovered. (Refer to Best Management Practice No. 400.)

**EMPLOYEE TRAINING**

All personnel shall receive training or at the least have access to this BMP when dealing with tanks, secondary containment, and sumps on Morenci property.

Training will be provided by Supervisor and/or Team Environmental Representative.

**QUESTIONS OR NEED HELP? CONTACT:**

**Division Representatives**

**Enviro Representatives Phone Ext:**

Waste Management Group:

**Jon Anderson .....865-6009**  
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**Bryan Taylor .....865-6697**

Water Quality Group:

**Salvador Robles .....865-7934**  
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**Environmental Services Office:**

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