

MWI 8550.2

BASELINE

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# MARSHALL WORK INSTRUCTION

AD01

## STORM WATER MANAGEMENT

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**DOCUMENT HISTORY LOG**

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<b>Marshall Work Instruction AD01</b>		
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## **1. PURPOSE**

This Marshall Work Instruction (MWI) establishes the procedures for ensuring that Marshall Space Flight Center (MSFC) complies with applicable environmental regulations, summarized in Marshall Procedures and Guidelines (MPG) 8500.1, "MSFC Environmental Management Program," regarding storm water pollution. Specifically, compliance must be maintained with the Clean Water Act, U.S. Environmental Protection Agency (EPA), and State storm water quality requirements. State and Federal laws mandate that storm sewers convey only storm water and permitted non-storm water discharges.

## **2. APPLICABILITY**

This MWI applies to all MSFC employees, contractors, and subcontractors (including leased facilities) that are responsible for underground storage tanks (USTs), above ground storage tanks (ASTs), hazardous waste/material storage areas, Investigation-Derived Waste (IDW), storage yards, construction sites, sandblasting areas, materials handling/fueling areas, equipment parking and maintenance areas, buried pipelines, garbage dumpsters, test facilities, or other activities affecting storm water quality.

## **3. APPLICABLE DOCUMENTS**

3.1 MPG 3410.1, "Training"

3.2 MWI 3410.1, "Personnel Certification Program"

3.3 MPG 8500.1, "MSFC Environmental Management Program"

3.4 MWI 8550.3, "Wastewater Compliance"

3.5 AD10-OWI-001, "Consolidated Environmental Response Plan (CERP)"

3.6 Alabama Department of Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) Permit Number AL0000221

## **4. REFERENCES**

NPG 8500.1, "NASA Environmental Management"

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## 5. DEFINITIONS AND ACRONYMS

5.1 ADEM. Alabama Department of Environmental Management.

5.2 AST. Above Ground Storage Tank.

5.3 CERP. Consolidated Environmental Response Plan.

5.3 CWA. Clean Water Act.

5.4 EED. Environmental Engineering Department.

5.5 Hazardous Waste. A waste or combination of wastes that can pose a substantial or potential hazard to human health or the environment when not properly managed; possesses at least one of four characteristics (ignitable, corrosive, reactive, or toxic) or appears on special EPA lists; includes toxic waste, spilled materials, and unused chemicals.

5.6 Investigation-Derived Waste (IDW). Waste generated during well drilling (soil cuttings), purged water from monitoring wells, rinse waters, etc., from investigations of potentially contaminated sites.

5.7 Spill Kit. Materials necessary for cleaning up small spills. At a minimum, the kit should consist of a 5-gallon bucket of dry absorbent ("kitty litter" or "oil-dry"). May also include absorbent pillows for cleanup of fuel oil on water surfaces.

5.8 Storm Water. Any runoff water or contained water resulting from rain.

5.9 Transient Operations. Include construction areas, temporary chemical storage areas, short duration accumulation of hazardous waste, sandblasting areas, and material handling/fueling areas.

5.10 Underground Storage Tank (UST). A storage tank and its integral piping system that has greater than 10% of its storage capacity in contact with the ground.

## 6. INSTRUCTIONS

MSFC is permitted to discharge storm water to specified receiving waters under ADEM NPDES Permit Number AL0000221. This permit establishes operational and management requirements, among other requirements, for maintaining storm water quality at MSFC. Operational areas and transient operations at MSFC may affect storm water quality. The Environmental Engineering Department

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(EED) should be notified immediately if a spill or leak is uncontained. The following outdoor work areas must be properly managed to protect the environment:

#### 6.1 USTs and ASTs

User organization supervisor and employees shall:

6.1.1 Ensure that there are no leaking, cracks, or detrimental corrosion of above ground fixtures.

6.1.2 Ensure that a spill kit is available near each tank.

6.1.3 Ensure that containment system bypass valves are properly sealed/closed and locked when not in use.

6.1.4 Ensure that the containment area is in good condition.

6.1.5 Immediately clean up and properly dispose of any spillage from material handling operations.

6.1.6 Post and maintain appropriate warning signs.

6.1.7 Ensure that erosion prevention at the containment area drain valve is satisfactory.

6.1.8 Ensure that overflow prevention controls for the tank are in place and effective.

EED shall:

6.1.9 Verify that there is no visible contamination (sheen) on water collected in the containment prior to discharging any storm water from the containment basin.

6.1.10 Discharge any storm water collected in the containment basin.

6.1.11 Inspect ASTs biweekly and after significant rainfalls and record findings in accordance with AD10-OWI-001, "Consolidated Environmental Response Plan (CERP)."

#### 6.2 Hazardous Waste/Material Storage Areas and IDW

User organization supervisor and employees shall:

6.2.1 Protect material storage containers from the weather and provide secondary containment.

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6.2.2 Ensure that spill kits are available at storage areas.

6.2.3 Ensure that needed erosion controls are in place.

6.2.4 Ensure that the containment system is in good condition.

6.2.5 Ensure that containment valves are closed.

6.2.6 Check secondary containment and drip pans for liquid or debris. If liquid is in the containment area, check storage container for leaks. Collect liquid and debris from containment area as necessary for proper disposal.

6.2.7 Ensure that containers are in good condition, properly labeled, and sealed.

6.2.8 Ensure that the storage area is neat and orderly.

6.2.9 Check for signs of spillage from material handling operations; clean up spills and properly dispose of spillage.

6.2.10 Identify and replace damaged pallets.

6.2.11 Remove and replace damaged containers by pumping into another product container or turning in for disposal.

6.2.12 Ensure that containers in the containment area are stacked no more than two containers high.

6.2.13 Ensure that chemical storage cabinets are closed and have no leaks.

EED shall inspect all hazardous waste and outdoor material storage areas monthly and IDW weekly in accordance with AD01-OWI-001, "Consolidated Environmental Response Plan (CERP)."

### 6.3 Storage Yards

User organization supervisor and employees shall:

6.3.1 Ensure stored equipment has no leaks.

6.3.2 Ensure that materials and equipment are stored neatly.

6.3.3 Ensure that designated items only are stored in the area.

6.3.4 Ensure that any stored, unused, or abandoned equipment is drained of oil, fuel, or chemicals.

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6.3.5 Ensure that erosion prevention is satisfactory.

EED shall inspect storage yards monthly and record findings in accordance with AD10-OWI-001, "Consolidated Environmental Response Plan (CERP)."

#### 6.4 Construction Sites

User organization supervisor and employees shall:

6.4.1 Ensure that erosion controls are in place and effective.

6.4.2 Ensure that hazardous waste/materials are properly stored and handled.

6.4.3 Ensure that the site is free of excessive debris.

6.4.4 Ensure that stored equipment and vehicles are not leaking.

6.4.5 Properly dispose of all empty containers.

Construction contractors shall:

6.4.6 Obtain storm water permits for construction sites that impact over 5 acres and ensure that all permit conditions are met. Deviations for phased construction projects are allowable.

6.4.7 Permit holder shall inspect construction sites daily and record findings in a daily log.

#### 6.5 Sandblasting Areas

User organization supervisor and employees shall:

6.5.1 Ensure that containment measures are in place to retain sandblast material and paint particles.

6.5.2 Verify that control measures are properly maintained.

6.5.3 Ensure that erosion prevention is satisfactory.

6.5.4 For transient sandblasting, MSFC user organizations shall inspect and record the date and sign that the above items were satisfactory. This documentation must be maintained for 3 years.

EED shall inspect sandblasting areas monthly and record findings in accordance with AD10-OWI-001, CERP.

#### 6.6 Materials Handling/Fueling Areas

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User organization supervisor and employees shall:

6.6.1 Check for signs of spillage from material loading and unloading operations and, if spillage occurs, shall stop activities and implement spill control activities.

6.6.2 Verify that effective measures are in place to prevent contact with storm water during material handling operations.

6.6.3 Ensure that spill kits are available at the site.

6.6.4 Verify that spill and overflow protection equipment works properly.

6.6.5 For transient operations, MSFC organizations shall record the date and sign that the above items were satisfactory. This documentation must be maintained for 3 years.

EED shall inspect materials handling/fueling areas monthly and record findings in accordance with AD10-OWI-001, "Consolidated Environmental Response Plan (CERP)."

#### 6.7 Equipment Parking and Maintenance Areas/Mobile Equipment

User organization supervisor and employees shall:

6.7.1 Conduct maintenance activities indoors when possible.

6.7.2 Implement control measures to minimize storm water contamination from parking and outdoor maintenance operations.

6.7.3 Route vehicle and equipment wash water to the sanitary sewer. An oil/water separator may be required for discharge to the sanitary sewer in accordance with MWI 8550.3, "Wastewater Compliance."

6.7.4 Check for signs of spills or leaks during routine operation.

6.7.5 Immediately clean up all spills that can be accomplished safely and properly dispose of the spilled material residues.

6.7.6 Verify that vehicles or equipment stored outdoors are not leaking. If leaking, the MSFC user organization shall immediately initiate action to have the equipment repaired.

6.7.7 Verify that all hazardous fluids are properly stored and managed.

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6.7.8 Ensure that spill kits are available at the site.

6.7.9 Position all stored vehicles, equipment, and hazardous chemicals away from storm water inlets.

EED shall inspect equipment parking and maintenance areas/mobile equipment monthly and record findings in accordance with AD10-OWI-001, "Consolidated Environmental Response Plan (CERP)."

#### 6.8 Vehicle or Equipment Washing Activities

User organization supervisor and employees shall:

6.8.1 Confine vehicle washing to appropriate areas.

6.8.2 Route wash water to the sanitary sewer in accordance with MWI 8550.3, "Wastewater Compliance."

6.8.3 Ensure that catch basins in the wash area are maintained and not clogged with sediment.

6.8.4 Ensure that erosion prevention is satisfactory.

EED shall inspect vehicle or equipment washing activity areas monthly and record in accordance with AD10-OWI-001, "Consolidated Environmental Response Plan (CERP)."

#### 6.9 Painting and Paint Removal Operations

User organization supervisor and employees shall:

6.9.1 Implement measures to prevent overspray.

6.9.2 Contain particles generated from sanding operations.

6.9.3 For transient operations, MSFC organizations shall record the date and sign that the above items were satisfactory. This documentation must be maintained for 3 years.

#### 6.10 Buried Pipelines

User organization supervisor and employees shall:

6.10.1 Inspect for signs of corrosion or deterioration when buried pipelines are uncovered and repair as necessary.

6.10.2 Ensure that pipelines that are not in service or that are in standby service are capped or blank flanged as appropriate.

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(This does not necessarily apply to mothballed facilities or systems in a standby configuration.)

6.10.3 Ensure that erosion prevention is satisfactory.

6.10.4 Notify Facilities Engineering Department of the pipeline status for updating the MSFC Master Plan.

#### 6.11 Garbage Dumpsters

MSFC personnel and contractors regularly using garbage dumpsters shall:

6.11.1 Ensure that dumpster lids are kept closed except when not in use.

6.11.2 Ensure that dumpster drain plugs are securely in place.

6.11.3 Ensure that the dumpster is in good condition.

6.11.4 Check daily for signs of dumpster leakage, make repairs, and properly clean up area.

6.11.5 Ensure that erosion prevention is satisfactory.

#### 6.12 Test Projects

MPG 8500.1, "Environmental Management Program," requires all MSFC user organizations to complete an environmental evaluation checklist (obtained from EED) at the onset of a program or project. The checklist covers issues related to storm water management. All new test projects conducted at MSFC shall meet this requirement.

### 7. NOTES

None

### 8. SAFETY PRECAUTIONS AND WARNING NOTES

None

### 9. RECORDS

Only the records generated by this MWI are included here. Details of other records are found in AD10-OWI-001, "Consolidated Environmental Response Plan (CERP)."

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9.1 Records of inspection are maintained by the EED for 3 years as part of CWA records, then destroyed or maintained for historical purposes, per NASA Records Retention Schedule 8/43.B.

9.2 EED shall maintain attendance records of Storm Water Inspection Training for 3 years then destroy, per NASA Records Retention Schedule N1-255-00-2.

9.3 EED shall maintain attendance records of Spill Prevention, Control, and Countermeasures Training for 3 years then destroy, per NASA Records Retention Schedule N1-255-00-2.

## **10. PERSONNEL TRAINING AND CERTIFICATION**

Personnel training is conducted per MPG 3410.1, "Training," and MWI 3410.1, "Personnel Certification Program."

10.1 Storm Water Inspection Training.

10.2 Spill Prevention, Control, and Countermeasures Training.

## **11. FLOW DIAGRAM**

None

## **12. CANCELLATION**

None

Original signed by  
Axel Roth for

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Director