

**MWI 8550.2  
REVISION L**

**EFFECTIVE DATE: June 1, 2020  
EXPIRATION DATE: June 1, 2025**

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# **MARSHALL WORK INSTRUCTION**

**AS01**

# **STORMWATER & WASTEWATER MANAGEMENT**

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## DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Change/ Revalidation/ Canceled)	Document Revision/ Change	Effective Date	Description
Baseline		3/17/02	[Footer URL updated 12/01/2003 by Directives Manager]
Revision	A	10/22/2004	This revision is in response to an action from NASA Headquarters requiring specific verbiage and updating document references.
Revision	B	8/11/2006	This revision includes changes of the organization number, office name, and changes in policy.
Revision	C	2/26/2007	This revision provides additional clarity for chemical storage requirements necessary for storm water management in accordance with environmental regulations. Also eliminates the term "spill kit."
Revision	D	8/12/2008	Revised 2. Applicability statement to address the applicability of this directive to the Michoud Assembly Facility. This directive is not applicable to the Michoud Assembly Facility. Added user requirements for oil-filled equipment and the modification of the requirements for garbage dumpsters. Revised section 10 to reflect the modified training information.
Revision	E	2/20/2009	Revised labeling requirements in Sections 6.1.18, 6.2.1.7, and 6.2.1.14. Added records requirements to Section 9. Added applicable document 3.2. In Section 3, removed a reference to MWI 8550.3 and added a reference to MPR 1440.2 "MSFC Records Management Program." Revised Section 6.12. [On 1/14/10, at the request of the OPRD, administrative changes were made at 6.1.2.5 to add above-ground pipelines to AST checklist, and at 6.6.1.3 and 6.13.1.2 e. to add "as necessary."] [On 7/2/10, at the request of the OPRD, administrative changes were made at 2. Applicability to update to latest statement, at 3.6 to correct directive type, at 3.7 to remove a link, at 5.13 to correct spacing, at 6.12.1.1 to state season instead of month, at 6.13.2 to change wording to "oil-filled" for consistency, and at 9. Records to clarify and make consistent.]
Revision	F	6/24/2011	Removed the requirement for keeping a spill kit at storm water source sites in the following paragraphs: 6.1.1.2; 6.2.1.2; 6.6.1.3; & 6.7.1.6 as there is no regulatory requirement to store spill material at the source and spill cleanup material is readily available from the on-site spill response contractor.
Change	1	2/26/2013	On 2/26/13, at the request of the OPRD, an administrative change was made to update 2. Applicability, update the title of MPR 8500.1, and change MPR 1840.2 references to MWI 8550.5.
Revision	G	8/4/2014	Changed the title from "Storm Water Management" to "Stormwater & Wastewater Management." Changed the responsibility of obtaining a lead sample from the Skeet Range to EEOH (Section 5.12.3). Revised secondary containment requirement (Section 5.1.1.8). Reduced clean up frequency for Skeet Range (Section 5.12.1). Added wastewater instructions from MWI 8550.3. Removed EEOH requirements and moved to AS10-OI-052. Updated to latest MWI template.
Revision	H	7/20/2015	Ensured that the instructions are only for organizations outside of AS10 and that the instructions correspond correctly to AS10-OI-59. Section 5.1, "USTs and ASTs," deleted instructions. Section 5.2, "Drum Storage Areas," deleted instructions. Section 5.4, "Constructions Areas," clarified instructions. Section 5.5, "Erosion Control," deleted section. Section 5.6, "Materials Handling and Fueling Areas," clarified instructions. Section 5.8, "Vehicle and Equipment Washing Areas," added instructions. Section 5.9, "Paint and Paint Removal Operations," added instructions. Section 5.10, "Outdoor Garbage Dumpsters," added instruction. Section 5.11, "Scrap Metal Dumpsters," added section. Section 5.13, "Skeet and Trap Shooting Range," clarified instructions.

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Revision	I	1/27/2017	Requirements for USTs/ASTs deleted. Requirements for drum storage areas deleted. Requirements for construction activities deleted. Requirements for materials handling/fueling areas deleted and clarified. Requirements for vehicle and equipment washing deleted and clarified. Requirements for painting and paint removal operations deleted and clarified. Requirements for scrap metal dumpsters deleted or clarified. Requirements for pistol range clarified. Requirements for skeet/trap range were clarified. Requirements for sewer management were clarified.
Revision	J	11/30/2017	Corrected links to stormwater and wastewater permits. Removed a requirement from Section 5.4.2. Clarified Section 5.10.1. Clarified 5.14.1. Clarified Section 5.5.2.
Revision	K	9/24/2019	Added section 5.15.14 3D Printer Water Baths
Revision	L	6/1/2020	Renamed section 5.14 from “Compliance with SID Permit” to “Industrial Wastewater.” Revised section 5.14 to clarify responsibilities related to industrial wastewater. Removed references to State Indirect Discharge permit due to permit termination.

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## **1. PURPOSE**

To provide instructions for ensuring that MSFC complies with applicable environmental regulations summarized in MPR 8500.1 and MPD 8500.1 regarding stormwater and wastewater compliance. State and Federal laws mandate that storm sewers convey only stormwater and permitted non-stormwater discharges. They also require that certain wastewater discharges be permitted.

## **2. APPLICABILITY**

2.1 This MWI applies to Center personnel, programs, projects, and activities, including contractors and resident agencies to the extent specified in their respective contracts or agreements. (“Contractors,” for purposes of this paragraph, include contractors, grantees, Cooperative Agreement recipients, Space Act Agreement partners, or other agreement parties.)

2.2 This MWI does not apply to the Michoud Assembly Facility.

2.3 This MWI applies the following: all mandatory actions (i.e., requirements) are denoted by statements containing the term “shall.” The terms: “may” or “can” denote discretionary privilege or permission, “should” denotes a good practice and is recommended, but not required, “will” denotes expected outcome, and “are/is” denotes descriptive material.

2.4 This MWI applies the following: all document citations are assumed to be the latest version unless otherwise noted.

2.5 This MWI specifically applies to all underground storage tanks (USTs), aboveground storage tanks (ASTs), hazardous waste/material storage areas, storage yards, construction sites, sandblasting areas, materials handling/fueling areas, equipment parking and maintenance areas, garbage dumpsters, scrap metal dumpsters, pistol or skeet/trap firing ranges, oil-filled equipment, other activities affecting stormwater quality, cooling towers, boiler blowdown, once-through non-contact cooling water, laboratory sinks, floor drains, emergency eye wash stations, photographic processing wastewater, deionized regeneration wastewater, wash racks and vehicle washing, sanitary sewer overflows, oil water separator (OWS), engine test quench water, fire water, and other sources of wastewater.

## **3. AUTHORITY**

3.1 MPD 8500.1, MSFC Environmental Management Policy

3.2 MPR 8500.1, MSFC Environmental Engineering and Occupational Health Program

## **4. APPLICABLE DOCUMENTS AND FORMS**

4.1 The Clean Water Act (CWA) of 1972 and amendments, 33 U.S.C sec. 1251-1387, et seq.

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4.2 The Resource Conservation and Recovery Act (RCRA) and amendments, 42 U.S.C. sec. 6901, et seq.

4.3 Spill Prevention, Control, and Countermeasure (SPCC) Rule, 40 CFR Part 112

4.4 MPR 3410.1, Training

4.5 MPR 4000.2, Property Management

4.6 MWI 3410.1, Personnel Certification Program

4.7 MWI 8550.5, Hazardous Material Management

4.8 Alabama Department of Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) Permit Number AL0000221  
(<https://explornet.nasa.gov/docs/DOC-21724>)

4.9 DOP-26-F (E.3), Division Operating Procedure Industrial Wastewater Treatment Facility

## **5. INSTRUCTIONS**

MSFC is permitted to discharge stormwater under the National Pollutant Discharge Elimination System (NPDES) permit, which is required by the Clean Water Act (CWA). The Environmental Engineering and Occupational Health (EEOH) Office may approve the discharge of certain industrial wastewaters to the sanitary sewer. EEOH shall be notified immediately if a spill or leak is uncontained.

### **5.1 USTs and ASTs**

#### **5.1.1 Individual employees shall:**

- a. Ensure that no leaking, cracks, or detrimental corrosion of aboveground fixtures exist.
- b. Ensure that spill prevention controls and containment area are in good condition.
- c. Immediately clean up and properly dispose of any spillage from material handling operations.
- d. Post and maintain appropriate warning signs as identified by EEOH.
- e. Ensure that erosion prevention at the containment drain valve is satisfactory.
- f. Ensure that out-of-service tanks have been drained, proper signage is posted, and piping is valved and closed off.

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## 5.2 Drum Storage Areas

### 5.2.1 Individual employees shall:

- a. If containers of oil, chemical, or liquid waste are stored outside, ensure all containers are protected from the weather and have secondary containment (110 percent of the largest container) to meet stormwater protection requirements.
- b. Check secondary containment for liquid or debris. If liquid is in the containment area, check container for leaks. Collect liquid and debris from containment area as necessary for proper disposal.
- c. Ensure that containers are in good condition, contents are properly labeled (in accordance with MWI 8550.5), and closed/sealed when not in use.
- d. Ensure that the storage area is neat and orderly.
- e. Check for signs of spillage from material handling operations, clean up spills, and properly dispose of spillage.
- f. Identify and replace damaged pallets.
- g. When pallets are used, ensure that if a spill occurs the release will be inside of the containment.
- h. Remove and replace damaged containers by pumping contents into another product container or turning in for disposal.

## 5.3 Storage Yards

### 5.3.1 Individual employees shall:

- a. Ensure stored equipment has no leaks.
- b. Ensure that materials and equipment are stored neatly.
- c. Ensure that appropriate material is stored in the yard (i.e., no chemical containers).
- d. Ensure that any stored, unused, or abandoned equipment is drained of oil, fuel, sludge, or chemicals; all connecting lines and piping have been disconnected from the equipment and blanked off; all valves (except for ventilation valves) have been closed and locked; and a conspicuous sign has been posted stating that it is “out of service” and noting the date of closure.
- e. Ensure that erosion prevention is satisfactory.

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f. Ensure that there is no visible sign of contamination on equipment in storage yard.

#### 5.4 Construction Activities

5.4.1 The Facilities Management Office shall:

- a. Ensure that erosion and sedimentation control measures are in place and effective.
- b. Ensure that the site is free of excessive debris.
- c. Ensure that there are no leaking vehicles or equipment.

5.4.2 Construction contractors shall:

- a. Obtain stormwater permits for construction sites that impact one acre or more and ensure that all permit conditions are met.
- b. Ensure that for construction sites:
  - (1) Erosion and sediment control measures are in place and effective.
  - (2) Site is free of excessive debris.
  - (3) There are no leaking vehicles or equipment.
- c. Record inspections and findings in a daily log and comply with the permit requirements.

#### 5.5 Materials Handling/Fueling Areas

5.5.1 Individual employees shall:

- a. Check for signs of spillage from material loading and unloading operations and (if spillage occurs), stop activities and implement spill control measures.
- b. Verify that effective measures are in place to prevent contact with stormwater during material handling operations.
- c. Verify that wheel chocks are present and in good condition.
- d. Discourage topping off when fueling tanks/containers.
- e. Warn entering vehicles to be aware of pipelines to ensure that no vehicle will endanger the aboveground piping or other transfer operations.

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## 5.6 Motor Pools/Vehicles and Equipment Maintenance/Mobile Equipment

### 5.6.1 Individual employees shall:

- a. Conduct maintenance activities indoors, when possible.
- b. Implement control measures to minimize stormwater contamination from parking and outdoor maintenance operations.
- c. Ensure that spills are appropriately cleaned up and the spilled material residues are properly disposed.
- d. Verify that vehicles or equipment stored outdoors are not leaking.
  - (1) If any are leaking, the user organization shall initiate action to have the equipment repaired.
- e. Position all stored vehicles, equipment, and hazardous chemicals as far away from stormwater inlets as possible.
- f. Ensure that secondary containment areas (i.e., curbed area at Building 4483), drip pans, or other methods to contain leaks approved by EEOH are used.

## 5.7 Vehicle and Equipment Washing

### 5.7.1 The Logistics Services Office and Facilities Management Office shall:

- a. Confine vehicle washing to designated areas.
- b. Ensure that catch basins in the wash area are maintained and not clogged with sediment or debris.
- c. Inspect the oil/water skimmer quarterly and ensure that it is emptied once it has reached 75 percent capacity.
- d. Ensure that materials are available at site to clean up small spills as necessary.
- e. Ensure that vehicles, equipment, and hazardous chemicals are positioned away from stormwater inlets.

## 5.8 Painting and Paint Removal Operations

### 5.8.1 Individual employees shall:

- a. Implement measures to minimize overspray and windblown particles.

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- b. Contain particles generated from sanding operations.
- c. Ensure that chemical products and waste materials are protected from the weather.
- d. Ensure that control measures are properly maintained.

5.8.2 Facilities Maintenance Office shall:

- a. Ensure the storm drain cover remains on the storm drain in the sandblasting facility.
- b. Ensure that sandblast media is swept up at least once per month.
- c. Ensure that the sand trap is emptied periodically.

5.9 Outdoor Garbage Dumpsters

5.9.1 MSFC personnel and contractors regularly using garbage dumpsters shall:

- a. Ensure that dumpster lids are closed at the end of the day.
- b. Ensure that dumpster drain plugs are securely in place.
- c. Ensure that the dumpster is in good condition.
- d. Ensure that the area is neat and clean.
- e. Ensure that there are no signs of leakage.

5.10 Scrap Metal Dumpsters

5.10.1 Individual employees shall:

- a. Keep dumpsters and surrounding areas neat and clean.
- b. Keep dumpsters in good condition and contact the Logistics Services Office to replace or repair dumpsters that have poor structural integrity.
- c. Clean up leaks or spills from a dumpster.
- d. As appropriate, users shall drain/clean oily scrap metal to extent possible and place appropriate oil-dry pads, if possible, in proximity of the scrap metal roll off container to minimize oily materials from entering the environment.

*Note: MPR 4000.2 requires users to render free of any hazardous materials or waste prior to disposal of any property.*

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- e. Place scrap metal bins as far away as possible from storm drains or ditches as is feasible.
- f. To the extent possible, prevent non-metal debris from getting into scrap metal containers by implementing preventative measures as necessary.

#### 5.11 Pistol Range

##### 5.11.1 The Protective Services and Export Control Office shall:

- a. Evaluate the need to remove lead from the berm based on usage.
- b. Ensure proper erosion controls by maintaining hay bales around the storm drain in the earthen berm.

#### 5.12 Skeet and Trap Shooting Range

##### 5.12.1 The NASA Marshall Exchange Skeet Club shall:

- a. Ensure that target debris, cartridge cases, and wads are removed from the range at least annually to prevent excessive accumulation. The cleanup is to be documented in the range logbook.
- b. Ensure that the number of shots fired is documented. Document separately, the shots fired at the “Quail Walk.”

##### 5.12.2 The NASA Marshall Exchange shall initiate, track, and monitor Center maintenance and environmental work orders and/or work requests to:

- a. Ensure that vegetative controls are maintained to prevent excessive soil erosion from shot fall areas.
  - b. Ensure that the skeet and trap shooting range is mowed from the central firing position out to where the targets fall out at least monthly during the vegetation growing season. Ensure that the area between where the lead shot falls out and the tree line, as well as the environmental sampling lanes extending beyond the radius clearing, are cleared (bush hogged) of any returning tree growth at least annually.
  - c. Ensure the skeet and trap shooting range potential hydrogen (pH) is between 6.5 and 8.5 standard units by testing the pH annually to maintain the pH within the recommended range (collect pH samples from 10 locations distributed across the site).
- (1) Work requests, testing results, and date of corrective applications (if required) shall be documented in the log book.

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### 5.13 Stationary and Mobile Oil-Filled Operational Equipment

#### 5.13.1 Individual employees shall:

a. Provide secondary containment for equipment oil reservoirs with a capacity of 55 gallons or greater or implement a documented monitoring and inspection program for the equipment.

b. On a monthly basis, verify that the following procedures and safeguards are in place, are being adhered to, and are documented if a monitoring and inspection program has been implemented:

(1) Prior to start-up, inspect equipment for signs of leakage, cracks, or detrimental corrosion.

(2) Inspect all hoses and connections for signs of wear.

(3) Replace flexible hoses and connections within the time period recommended by the manufacturer or stated on the preventative maintenance schedule.

(4) Perform all maintenance activities indoors, when possible.

(5) Ensure that control measures are in place to minimize stormwater contamination from releases into floor drains, trenches, or drainage ditches and that spill cleanup materials are available at the site, as necessary.

(6) Ensure that all spillage is appropriately cleaned up.

(7) Employ the use of secondary containment areas or drip pans, when possible.

(8) If equipment has secondary containment, verify that bypass valves are properly sealed/closed and locked when not in use.

(9) If equipment has secondary containment, verify that there is no visible contamination (oil sheen) on water collected in the containment prior to draining any water from the containment.

(10) If equipment has secondary containment, verify that the containment is in good condition and free of debris.

(11) Ensure that appropriate warning signs are posted and maintained.

(12) Include these provisions in the standard operating procedures (SOPs) for operating the equipment, if applicable.

c. These inspections and procedures apply to all oil-filled equipment (55 gallons or more, active or inactive) unless the equipment has been properly drained of fluids and is labeled as “out of service.” Otherwise, routine inspections or secondary containment are required.

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#### 5.14 Industrial Wastewater

##### 5.14.1 User organizations shall:

- a. Notify EEOH of changes to and/or new wastewater processes that discharge to the sanitary sewer and obtain approval from EEOH prior to implementation.
- b. Contact the Environmental Support Contractor at 4-9578 for proper disposal of wastewaters that have not been approved by EEOH for discharge to the sanitary sewer.
- c. Not increase the use of process water or attempt to dilute wastewater discharges.

#### 5.15 MSFC Sewer Management

##### 5.15.1 Cooling Tower Blowdown. User organizations shall:

- a. Discharge cooling tower blowdown to the sanitary sewer or the storm sewer if the discharge meets the NPDES permit conditions. Consult EEOH prior to discharging to storm sewer.
- b. Obtain EEOH approval for all additives used in cooling towers.
- c. Notify EEOH at least 60 days before a change in additives takes place if the cooling tower discharges to the storm sewer.

##### 5.15.2 Boiler Blowdown. User organizations shall:

- a. Discharge boiler blowdown to the sanitary sewer or to the storm sewer if the discharge is permitted by the MSFC NPDES permit. Consult EEOH prior to discharging to storm sewer.
- b. Obtain EEOH approval for all additives used in boilers.
- c. Notify EEOH at least 60 days before a change in additives takes place if the boiler blowdown discharges to the storm sewer.

##### 5.15.3 Once-Through Non-Contact Cooling Water. User organizations shall:

- a. Discharge once-through non-contact cooling water to the storm sewer (whenever possible).

##### 5.15.4 Laboratory Sinks. User organizations shall:

- a. Route discharges from laboratory sinks to the sanitary sewer.
- b. Never pour chemicals or oil down laboratory sinks.

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5.15.5 Floor Drains. User organizations shall:

- a. Route floor drains to the sanitary sewer.
- b. Never pour chemicals or oil down floor drains.

5.15.6 Emergency Eye Wash Stations. User organizations shall route emergency eye wash stations to the sanitary sewer or provide an alternative collection system.

5.15.7 Photographic Processing Wastewater. User organizations shall:

- a. Route photographic processing wastewater to the sanitary sewer if a metals recovery system is put in place with EEOH approval or collect the wastewater in an accumulation container and Call Environmental Support Contractor at 4-9578 for proper disposal.
- b. Collect photographic processing wastewater in accumulation containers for proper offsite disposal if heavy metals concentrations exceed regulatory limits.

5.15.8 Deionized (DI) Regeneration Wastewater. User organizations shall:

- a. Treat DI regeneration wastewater to an acceptable pH level (a pH of 6 to 10) prior to discharge to the sanitary sewer.
- b. If DI regeneration wastewater pH levels are unacceptable for discharge to the sanitary sewer (pH less than 6 or greater than 10), collect the wastewater in an accumulation container and call Environmental Support Contractor at 4-9578 for proper disposal.

5.15.9 Washracks and Vehicle Washing. User organizations shall route discharges from wash racks and vehicle washwater to the sanitary sewer.

5.15.10 Sanitary Sewer Overflows. User organizations shall notify EEOH when sanitary sewer overflows are discovered. (Sanitary sewer overflows indicate a collection system that is inadequate or in need of repair. Overflows from the sanitary sewer occur under extraordinary circumstances.)

5.15.11 OWS. User organizations shall:

- a. Route discharges from OWSs to the sanitary sewer.
- b. Prevent or minimize non-contaminated stormwater runoff to the OWS.

5.15.12 West Test Area Engine Test Quench Water. User organizations shall:

- a. Contact EEOH prior to testing rocket engines/rocket motors (with fuels that may be considered a potential water contaminant) in the West Test Area for the purpose of determining how to comply with any environmental compliance requirements that may apply.

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b. Impound quench water (by closing the valve before the test) to allow EEOH to evaluate the water for compliance with Resource Conservation and Recovery Act (RCRA), CWA, or other environmental regulation.

c. Wait for EEOH approval prior to discharge of engine test quench water to permitted stormwater outfalls.

5.15.13 Fire Water. User organizations shall discharge water used to extinguish fires to the storm sewer unless contaminated with oil or chemicals (if contaminated, collect the discharge water and contact EEOH for proper disposal).

5.15.14 3D Printer Water Baths. User organizations shall not pour the wastewater from 3D Printer water baths down the sink or floor drain. Call Environmental Support Contractor 4-9578 for proper disposal.

5.16 Required Training. Personnel training is conducted per MPR 3410.1 and MWI 3410.1.

5.16.1 NPDES Permit Number AL0000221 requires initial and refresher training of operators, maintenance personnel, and other technical and supervisory personnel who have the responsibility of operating, maintaining, or supervising the operation and maintenance of equipment items at the facility. All identified points of contact with these responsibilities and all designated stormwater inspectors shall complete the SHE 317 “Environmental Compliance Training” annually to fulfill the permit requirements.

5.16.2 The Spill Prevention, Control, and Countermeasure (SPCC) Rule requires that oil-handling personnel be trained in the operation and maintenance of equipment to prevent discharges, discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and the contents of the facility SPCC Plan. All personnel who routinely handle oil products shall complete the training specified in SHE 317, Environmental Compliance Training, annually to fulfill the permit requirements.

5.16.3 The IWTF Division Operating Procedure, DOP-26-E, requires that employees engaged in monitoring, operations, treatment, and/or disposal of chemical waste at the IWTF complete training as a wastewater technician.

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## **6. CANCELLATION**

MWI 8550.2K, Stormwater & Wastewater Management dated September 24, 2019.

*Electronically approved by*

Jody Singer  
Director

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## **APPENDIX A DEFINITIONS**

**Blowdown.** Periodic flow from cooling towers or boilers that is required to maintain proper water quality within the tower or boiler. Generally, blowdown occurs when the conductivity of the cooler water is higher than the desired range for the system.

**Discharge.** Continuous or intermittent flow of water that requires disposal (examples: stormwater, sanitary sewage, or cooling water).

**National Pollutant Discharge Elimination System (NPDES) Permit.** Alabama Department of Environmental Management (ADEM) issued to MSFC the NPDES Permit No. AL0000221, which allows specified discharges to Indian Creek, Huntsville Spring Branch, and an unnamed tributary to Wheeler Lake as described in the permit.

**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 Environmental Protection Agency (EPA) lists that include toxic waste, spilled materials, and unused chemicals.

**Oil.** Oil of any kind or in any form, including, but not limited to: fats, oils, or greases of animal, fish, or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits, or kernels; and, other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oil mixed with wastes other than dredged soil.

**Oil-Filled Operational Equipment.** Includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device. Oil-filled operational equipment does not include manufacturing equipment. Examples of oil-filled operational equipment include hydraulic systems, lubricating systems (including lubricating systems for pumps, compressors, and other rotating equipment), gear boxes, machining coolant systems, heat transfer systems, transformers, other electrical equipment, and other systems containing oil to enable operation.

**Oil-Handling Personnel.** All civil service and contractor employees who routinely handle and/or are responsible for the storage of oil in quantities of 55 gallons or more.

**Sanitary Sewer.** The system of pipes and pumps designed to convey domestic wastes to the Wastewater Treatment Plant.

**Storm Sewer.** The system of pipes, ditches, channels, and natural streams used to convey stormwater.

**Stormwater.** Any runoff water or contained water resulting from rain.

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User Organization. The organization that is responsible for the activity.

Underground Storage Tank (UST). A storage tank and its integral piping system that has greater than 10 percent of its storage capacity beneath the surface of the ground.

Wastewater. Any discharge to the sanitary sewer.

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## **APPENDIX B ACRONYMS**

ADEM. Alabama Department of Environmental Management

AST. Aboveground Storage Tank

BMP. Best management plan

CWA. Clean Water Act

DI. Deionized

DMR. Discharge Monitoring Reports

DOP. Division Operating Procedure.

EEOH. Environmental Engineering and Occupational Health Office

EPA. Environmental Protection Agency

IWTF. Industrial Wastewater Treatment Facility

NPDES. National Pollutant Discharge Elimination System

OWS. Oil Water Separator

pH. Potential Hydrogen

RCRA. Resource Conservation and Recovery Act

SHE. Safety, Health, and Environmental

SOP. Standard Operating Procedure

SPCC. Spill Prevention, Control, and Countermeasure

UST. Underground Storage Tanks

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**APPENDIX C (Reserved for Verification Matrix)**

None.

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## **APPENDIX D RECORDS**

The following records are maintained according to the “List of AS10 Environmental Records” located at <https://explornet.msfc.nasa.gov/community/msfc/office-of-center-operations/as10>:

- D.1 Stormwater inspections for construction activities.
- D.2 Inspections for the Skeet and Trap Shooting Range.
- D.3 Skeet Range sampling records.
- D.4 Inspections for the stationary and mobile oil-filled operational equipment.
- D.5 Compliance inspection and/or audit findings.
- D.6 Personnel training records for civil service employees.
- D.7 Personnel training records for contractor employees.
- D.8 NPDES Monitoring information: Discharge Monitoring Reports (DMR), data records, noncompliance notification, cover letter, chain of custody.
- D.9 NPDES Permit Number AL0000221.
- D.10 Stormwater Pollution Prevention Plan.
- D.11 Construction Best management plan (BMP) Plans.
- D.12 Stormwater inspection reports.
- D.13 Stormwater release forms.
- D.14 IWTF calibration and maintenance records.
- D.15 Chemistry lab calibration and maintenance records.
- D.16 Chemistry Lab sample collection log book.