

## 6.0 Mobilization, Implementation, Monitoring, and Documentation

### 6.1 Mobilization/Implementation

The first step of mobilization should be the implementation of controls. The controls should be constructed or applied in accordance with state or local standard specifications. If there are no state or local specifications for control measures then the controls should be constructed in accordance with Appendix C. In any event the controls must be constructed in accordance with good engineering practices and in compliance with NPDES regulations. Appendix C lists typical design standards for structural control measures. The controls should be constructed and the stabilization measures applied in the order indicated by the sequence of major activities.

To ensure that controls are adequately implemented, it is important that the work crews installing the measures are experienced and/or adequately trained. Improperly installed controls can have little or no effect and may actually increase pollutant export. It is also important that all other workers on the construction site be made aware of the controls so that they do not inadvertently disturb or remove them.

### 6.2 Site Inspections

Inspection and maintenance of the control measures are as important to pollution prevention as proper planning and design. Inspection should be performed at the frequency specified in the SWPPP and/or the issued permit. **Each state has different inspection and reporting requirements, the reader is encouraged to contact the permit authority for the states in question.** The inspector should note any damage or deficiencies in the control measures in an inspection report. An example of an inspection report can be found in Appendix D, as Exhibit D-2. The operator should correct damages or deficiencies as soon as practicable after the inspection, and any changes that may be required to correct deficiencies in the SWPPP should be made as soon as practicable after the inspection. In addition to the inspection and

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maintenance reports, the operator should keep records of the construction activity on the site. In particular, the operator should keep a record of dates when each activity starts and is completed. Exhibits D-2 through D-4, in Appendix D may be used to record this information. The Inspection and Maintenance Report Forms are organized into three basic management measures: (1) Structural Controls, (2) Vegetative Controls, and (3) Management Measures. The particular practices associated with these measures are located in Appendix C, and are categorized in Section 3.4.4. The general permit requires inspection every 7 days or within 24 hours of a storm event of 12.5 mm (0.5 inch) or more. All disturbed areas of the site, areas for material storage, locations where vehicles enter or exit the site, and all of the erosion and sediment controls that were identified as part of the plan must be inspected. Controls must be in good operating condition until the area they protect has been completely stabilized and the construction activity is complete. The construction project manager will designate an inspector for monitoring BMP's (these inspections can be performed as part of a regular construction inspection program). As the principal permittee, COE will also regularly inspect each construction site to determine compliance with provisions of the SWPPP. Construction sites which do not comply with provisions of the SWPPP will be shut down by COE until compliance is achieved.

### 6.3 Personnel Designation

Designated personnel for each contractor/tenant construction project should be listed in the Pollution Prevention Committee Members form, Exhibit D-1, in Appendix D.

### 6.4 Training

Personnel performing site inspections (COE and tenant projects) are required to be experienced in construction practices and erosion and sediment control practices. Many states and organizations offer general training programs in sediment and erosion control. Training as a whole should address:

- The location and type of control measures.
- The construction requirements for the control measures.
- Spill response.
- Inspection and maintenance record-keeping requirements.
- Pollution control laws and regulations.
- Good housekeeping and material management practices.
- Particular construction activity features and operations designed to minimize storm water pollution.

**COE will review SWPPP requirements with each tenant or contractor before approving construction activities.**

A large part of the success of an SWPPP is the capability and interest of the employees responsible for implementing and maintaining the program. Personnel must understand the importance of the program and the goals of the SWPPP. Personnel must be trained in the techniques of response, removal, and documentation. The permit authority representatives will be inspecting the general permit participants, and it is important that they are received by trained, knowledgeable personnel who have access to the SWPPP, environmental files, and other documentation. The SWPPP documentation must be current and complete when inspected.

Annual training workshops and meetings should be established, at which time employee participation and input should be encouraged. Training schedules should be recorded (see Table E-5, Appendix E). New techniques of storm water management controls as well as changes in permit compliance or limits should be explained to the employees.

## **6.5 Nonstorm water discharges**

### **6.5.1 Certification**

The general permit requires nonstorm water discharges to be eliminated prior to the implementation of the SWPPP. Existing industrial facilities must certify that there are no nonstorm water discharges present in the storm water drainage system. All facilities must certify and monitor outfalls for dry weather discharges.

The certification page for nonstorm water certification is shown in Appendix F. A certification page should be signed and retained as part of the SWPPP documentation. All forms filled out while surveying and evaluating outfalls should also be inserted into the nonstorm water discharge section of the SWPPP. A record of methods used, dates, and time conducted should be listed on the form.

If certification is not feasible because of the inability to eliminate the nonstorm water discharge because of the need for significant structural changes, the construction activity must notify the permit authority. This notification should include a summary of why the extension in eliminating nonstorm water discharges is required and a schedule indicating when nonstorm water discharges will be eliminated. The schedule is subject to modification by the permit authority.

### **6.5.2 Nonstorm Water Inspection**

The inspection for nonstorm water discharges should take place concurrently with the inspection of the drainage system (Section 6.5.3).

### 6.5.3 Drainage System

There may be several drainage systems serving the construction activity depending on topography. The inspection for each drainage system should begin at the farthest discharge point from the center of construction activity operations. The farthest discharge point may be at the property boundary, or it may be at the point where the "waters of the United States" cross the construction activity property and intersect with a drainage system.

Physical inspection of the outfalls should include (principal issues identified):

- **Flow** If flow is present, and precipitation has not occurred within the past 3 days, there may be a problem requiring further investigation unless the source is positively known and is nonpolluting.
- **Odor** The presence of any odor from the drainage system may indicate an unnatural occurrence.
- **Clarity** If water is present, standing or flowing, and it is not clear, pollution should be suspected.
- **Floatables** If there is floating debris, garbage, sewage, or an oily sheen, the source of the material should be identified.
- **Stains, etc.** If stains are present on lined channels/pipes, or other than the normal vegetation or soil color, this may be an indicator requiring further investigation.
- **Vegetation** If vegetation in the discharge channel is more luxurious or, conversely, appears stressed in comparison to adjacent vegetation, this is likely an indicator of excess nutrients or other problems and requires further investigation.

In addition, inspection should note siltation or scour problems below outfalls, or at system confluences, for referral to construction activity maintenance officials.

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Chemical inspection of outfalls may make use of dry weather monitoring kits if dry weather flow is observed from the discharge point(s) or stagnant pools are observed at the discharge point(s). The results of the tests using these kits can assist in identifying possible problem sources upstream in the system.

From the discharge point(s), the inspection should proceed upstream. Similar inspections should be made of each intervening discharge point, if the storm drain is not continuous to its final outfall. If the storm drain is continuous, inspections should be made at each manhole upstream to the inlets of the storm water drainage system. **(Inspectors shall not enter manholes unless OSHA-approved confined space entry procedures are followed.)** The inspectors should make note of any of the items listed above. Particular attention should be given to connections in the storm water drain lines or any inlet lines not shown on the plans. Patched pavements may be indicators of postdesign connections.

**Attention should be given to determine the discharge destination of floor drains. These drains must be connected to the sanitary sewer system.**

The flow paths to each of the inlets must be inspected, as well as the inlets themselves. Particular attention should be given to the presence of grease, oil, fuel, chemical, or solvent residues along these flow paths, as well as any other staining that could indicate a pollutant that could be washed down the storm drain. Inlet sumps should be inspected. Debris collected in inlet sumps should be removed regularly and before any substantial buildup occurs.

The physical condition and cleanliness of the components of the drainage system must be inspected as well. The inspector should make sure that the drainage areas are clean and free of debris. The physical integrity of all conveyances and discharge points should be inspected for corrosion, seam and joint connections, erosion, silting, leaks, and condition of dikes, berms, and other structures of the storm water controls.

**These inspections, related to the construction activity SWPPP's, are important to ensure that pollutants arising from other industrial activities are not incorrectly ascribed to the construction activity.**

Table D-6, Appendix D, will be used to record drainage system maintenance and inspection observations.

Inspection of paved areas is not a difficult task, because all surfaces can be easily seen. With respect to storm water pollution, if the paved areas are free of visible pollutants, storm water contamination is less likely.

Inspections will focus on maintenance activities that assure that paved surfaces are clean of chemicals, grease, oil, solvents, and fuels, and that other potential pollutants are kept off the paved areas, or that they are kept covered and out of storm water flow paths.

Paved areas will also be inspected for cracks. Where there is a significant potential for a spill, such as drip pads or fueling stations, cracks may allow pollutants to seep into the soil where ground water contamination could occur. Maintenance activities could include proper grouting of all pavement joints.

Herbicides and petroleum products are sometimes applied to pavement cracks and at joints to control vegetation growth. The use of herbicides or other chemicals should be reviewed, as these materials may combine with storm water runoff or infiltrate into the underlying soil. If herbicides must be used, those with low toxicity and persistence should be considered. The frequency of application should be reduced to the minimum required. Grouting of joints and cracks may offer an alternative to herbicide application.

## 6.6 Final Stabilization/Termination

As soon as practicable after construction activities have been completed in a disturbed area, permanent stabilization should be started to prevent further erosion of soil from that area. All disturbed areas of a site, except those portions which are covered by pavement or a structure, should be finally stabilized once all construction activities are completed. Final stabilization requirements may vary from permit to permit. Final stabilization is defined by the EPA General Permit as meaning that all soil-disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 70 percent of the cover for the unpaved areas has been established or equivalent stabilization measures, such as the use of riprap, gabions, or geotextiles, have been employed.

Operators of a construction site must continue to comply with permit conditions until: (1) they no longer meet the definition of an operator of a construction site; or (2) the construction activity is complete, all disturbed soils have been finally stabilized, and temporary erosion and sediment controls have been or will be removed. A permittee should submit a Notice of Termination (NOT) to inform EPA that they are no longer an operator of a construction activity. The NOT is a one-page form (see Appendix F) which should be completed and submitted to the permitting authority when a site has been finally stabilized or when an operator of a construction activity changes. The NOT is typically the final task required to comply with the requirements of an NPDES storm water permit for a construction activity. The NOT communicates to the permitting authority that the construction activity has ceased and the area is stabilized.

Note that when there is a change in operators of a construction activity, then the new operator must submit an NOI to be covered by the permit at least 2 days before the change in operator.

Where the NOT's are submitted depends on the permitting authority. Some state agencies do not require submittal of NOT's. Federally regulated NPDES permits require NOTs to be submitted to the following address:

Storm Water Notice of Termination  
P.O. Box 1185  
Newington, Virginia 22122

Following the termination of construction activities, the permittees must keep a copy of the SWPPP and records of all the data used to complete the NOI for a period of at least 3 years following final stabilization. The record retention period may be extended by the permitting authority's request.

**FOR THE COMMANDER:**

10 Appendices  
(See Table of Contents)

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