

Chapter 4

Inspection of Construction Sites

This chapter provides information about inspecting erosion control, sediment control and stormwater management practices during the construction period. It covers inspections using visual procedures that can be evaluated by trained individuals. It does not cover inspections that involve water sampling or testing. It does not cover the installation of the practices or measures that may be used for erosion and sediment control and stormwater management.

The information in this chapter should be considered generic with the recognition that state and local regulations may provide very specific requirements related to inspector credentials, frequency of inspections, report format, submission of reports to permitting authorities, and retention of reports.

Requirements for Inspectors

Inspections should be made by persons that understand how practices are to be properly installed, how they should perform, and how practices should be maintained. Inspectors should have enough knowledge about each practice used to determine if it is effective and whether or not it needs maintenance or repair. Inspectors should know enough about the practices to realize that there may need to be an additional practice or a different practice in a problem area.

Inspectors do not have to understand how a practice is designed, although the more a person knows about a practice the better the person will understand how the practice should be maintained. Inspectors should also know how to read site plans and understand the relationship of the erosion and sediment control practices and other stormwater management activities with the overall plan.

Inspectors need communications skills so they can explain installation and maintenance problems to the contractor or owner and anyone else that “needs to know”. Also, inspectors must provide written reports to appropriate persons for their information or follow-up actions. Actions may include maintenance, repair or a request for a qualified design professional to assist, or for reporting to meet permit requirements. In summary, both written and verbal communication skills and an understanding of report requirements are essential tools for the inspector.

The credential requirement for inspecting construction sites in Alabama is stated in the NPDES General Permit for Construction administered by the Alabama Department of Environmental Management. Local government regulations may require that persons providing inspection services have additional credentials or training to be designated as an inspector.

How Often Should Inspections be Made

In general, inspections should be made frequently and after major rain events. Since rainfall triggers inspections on permitted sites, a rain gauge is required.

Practices that can be damaged by construction activities need to be inspected on a regular basis, at least weekly and in some cases daily so the practices will be repaired or maintained and in good condition when a major rain event occurs. During periods of major rain events, practices need inspection daily.

Practices that are not normally affected by construction activities after installation need inspecting after each major rain event and as a minimum on a monthly basis. For vegetative practices, inspections should be made during early growth stages, regardless of rainfall events, to determine if reseeding is needed to ensure an adequate vegetative cover. Newly vegetated areas damaged by rainfall events should be repaired immediately after the area is determined to need repair.

The frequency requirement for inspecting construction sites in Alabama is stated in the NPDES General Permit for Construction administered by the Alabama Department of Environmental Management. Local governments may require inspections more frequently than is required by the State General Permit.

How are Practices Inspected

Visual evaluations are made of practices to determine their condition. Also, discharge points are reviewed to determine if sediment and turbid water are leaving the construction site.

Inspectors must know enough about the practices being inspected to make sound judgments about the need for repairs and maintenance. If there is any doubt about a situation, a more knowledgeable person should be requested to assist in the determination of appropriate actions. A good example of requesting another person for expert guidance is when a permanent seeding appears borderline and there is time to reseed before the recommended planting period ends.

Inspectors and others involved in erosion and sediment control activities must understand that erosion and sediment control plans are dynamic and usually need revising if construction involves more than a large lot and the construction period extends more than a few weeks. Inspectors should be encouraged to ask for assistance of design professionals if there are any reservations that a plan needs modifying.

Suggestions for Inspectors

- Study the erosion and sediment control and stormwater management plan. Identify the practices and schedule. Participate in pre-construction and construction conferences whenever possible.
- Review the site and practices with the plan in hand according to a predetermined schedule and the predetermined triggers.
- Determine if the practices planned are installed properly and in the correct sequence.
- Determine if the practices appear in good condition (Do the practices need maintenance or repair?). This should be an objective comparison of what will be needed when major rain events occur.
- Determine if the system of practices appears to be effective for the construction site by examining discharge points. Evidence of ineffectiveness may be muddy or turbid water leaving the site or sediment deposits in the runoff conveyance system practices such as check dams and channels (swales).
- Determine if practices are effective during or immediately following a rain event. This is the best time to determine the effectiveness of the system and particularly to determine if turbid water is leaving the site.
- Determine if the site is managed to prevent a problem with debris, trash, petroleum products and chemicals (Are Groundskeeping and Spill Prevention practices used or needed?).
- Document relevant site information with photography.
- Complete or draft the appropriate inspection documents while on the site.

Discharge points should be examined objectively to determine if sediment deposits exist at adjacent off-site areas. Deposition of sediment indicates that erosion and sediment control may not be effective. An absence of deposits at discharge points (just below the outfall) where there is an opportunity for sedimentation to occur is a good indicator of an effective system. On the other hand, lack of sediment deposits at a point with high flow velocities will be less meaningful.

Inspections should be documented in a written report, log and/or checklist. Whatever format is used to document the inspection, the report should contain the site name, the date and time of inspection, the inspector and any other persons involved in the inspection, dates when key activities occurred (for example, grading the site and installing practices), comments or ratings concerning the success or failure of the practices, what corrective action(s)

may be needed, what repairs or maintenance was done since the last inspection and verbal communications with the contractor or owner that took place during the inspection. In addition, there may be other items required by the permit holder or contractor.

Photography can be used very effectively to document the findings during an inspection and becomes important in the future as site conditions change and the practice(s) is no longer used or issues arise over the impacts of the site. Developing a comprehensive file of photographs that supports inspections is a sound business!

There is a range of formats used for documenting inspections. Two examples of inspection report forms are provided (see Figure 4-1 and Figure 4-2). Figure 4-1 uses a detailed listing of practices to provide an efficient method for repeating the documentation at a site and may serve as a supplemental sheet to a more formal report form such as Figure 4-2. It is important to recognize that local and state regulations may require a specific inspection form and this must be completed in addition to other formats that are used.

There is usually a permit requirement that a responsible person (representing the permit holder) sign an inspection report to acknowledge that they have been informed and understand what is needed to meet requirements for erosion and sediment control and stormwater management at a specific construction site.

BMP INSPECTION REPORT

Client _____ Project name _____ and Reg. no. _____

Inspected By _____ Date and Time _____ Page __ of __

A. Phase of Development: Initial Site Grading __ Building and Construction __ Punch List __

| B. <u>BMPs Applied</u> (check all that apply) | <u>Condition of BMPs (check one)</u> | | | Comments |
|--|--------------------------------------|-------------|-------------|----------|
| | <u>Good</u> | <u>Fair</u> | <u>Poor</u> | |
| <input type="checkbox"/> Construction Exit | ___ | ___ | ___ | |
| <input type="checkbox"/> Barrier-Class __ Silt Fence | ___ | ___ | ___ | |
| <input type="checkbox"/> Check Dams | ___ | ___ | ___ | |
| <input type="checkbox"/> Diversion | ___ | ___ | ___ | |
| <input type="checkbox"/> Grass Swale | ___ | ___ | ___ | |
| <input type="checkbox"/> Inlet Protection | ___ | ___ | ___ | |
| <input type="checkbox"/> Outlet Protection | ___ | ___ | ___ | |
| <input type="checkbox"/> Sediment Basin | ___ | ___ | ___ | |
| <input type="checkbox"/> Temporary Seeding | ___ | ___ | ___ | |
| <input type="checkbox"/> Permanent Seeding | ___ | ___ | ___ | |
| <input type="checkbox"/> Groundskeeping | ___ | ___ | ___ | |

C. Additional BMPs needed (potential practice and location):

D. Additional Comments:

E. Sampling: Instream sampling necessary to evaluate the effectiveness of BMP implementation based on evaluation of qualified credentialed professional. Yes __ No __

F. Significant rainfall events since last inspection (date and amounts):

G. Inspection report reviewed with responsible owner/operator

Inspector _____ Date _____

Responsible owner/operator _____ Date _____

Figure 4-1 BMP Inspection Report Form

ADEM FIELD OPERATIONS DIVISION – NPDES CONSTRUCTION, AND NONCOAL MINING LESS THAN 5 ACRES STORMWATER INSPECTION REPORT AND BMP CERTIFICATION

RESPOND WITH "N/A" AS APPROPRIATE. FORMS WITH INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL BE RETURNED AND MAY RESULT IN APPROPRIATE COMPLIANCE ACTION BY THE DEPARTMENT. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. PLEASE TYPE OR PRINT IN INK.

Complete this form, attach additional information as necessary, and send report to the nearest ADEM office.

Item I.

| | | | |
|--|------------|--|--------------------------------|
| Registrant Name | | Facility/Site Name | |
| NPDES AL | County | Facility Contact and Title | |
| Facility Latitude & Longitude (decimal or deg,min,sec) | | Facility Street Address <u>or</u> Location Description | |
| Township(s), Range(s), Section(s) | | City | State Zip |
| Phone Number | Fax Number | E-Mail Address | |

Item II.

List name of current ultimate receiving water(s) (indicate if through MS4) and the number of disturbed acres which drain through each treatment system or BMP:

| Receiving Water | Disturbed Acres | Receiving Water | Disturbed Acres |
|-----------------|-----------------|-----------------|-----------------|
| _____ | _____ | _____ | _____ |

Item III.

Any Discharge Sampling Data Attached. Any Instream Sampling Data Attached. Any Photographs attached.

Based on this site evaluation which a QCI, QCP, or a qualified person under the direct supervision of a QCP conducted, discharge and/or instream sampling is not necessary to properly evaluate the effectiveness of BMP implementation to ensure compliance with this registration. I understand that it is the responsibility of the registrant to know and effectively evaluate the quality of the stormwater being discharged. Lack of knowledge regarding the requirements of ADEM Administrative Code Chapter 335-6-12, stormwater discharge or instream water quality, shall not constitute a valid defense with regard to deficiencies in BMP implementation and maintenance, or negative impacts to water quality.

Item IV.

INSPECTION RESULTS: (Describe current activities, deficiencies, proposed corrective action(s) and compliance schedule, etc.)

“Based upon the inspection of (date & time) _____ by the QCP, QCI, or a qualified person (list: _____) under the direct supervision of the QCP identified below conducted, the QCI or QCP identified below certifies that effective structural and non-structural BMPs have been fully implemented and regularly maintained to the maximum extent practicable for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff, **except for those deficiencies noted above**, in accordance with the facility’s CBMPP, good sediment, erosion, and other pollution control practices, and the requirements of ADEM Administrative Code Chapter 335-6-12. I certify that discharges have been tested or evaluated for the presence of non-stormwater and non-authorized process wastewaters. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.”

| | | |
|----------------------------------|-----------|------|
| Name & Designation of QCI or QCP | Signature | Date |
|----------------------------------|-----------|------|

| | | |
|---|-----------|------|
| Name & Title of Registrant Responsible Official | Signature | Date |
|---|-----------|------|

Figure 4-2 ADEM Form 500 1-03 FOD Stormwater Registration Inspection Report Page 1 of 1