Inspections For Compliance

Inspecting & Planning to Keep You in Compliance
Inspection/Monitoring/Reporting

- Know if your plan is working
- Document corrective actions
“A nation that destroys its soils, destroys itself.”

-32nd President

-Franklin D. Roosevelt
A Contractor that destroys their site & soils destroys their profits.

Slope Stabilization or Flow Management?
Monitoring ~ Reporting ~ Recordkeeping

- Permit Compliance
- Adaptive Management Analysis
- Risk Management
BMP Inspection & Monitoring for Permit Compliance

- Visual Inspections
- How, what & where do you inspect
- Who does inspections
- Records & Reporting
IV. STANDARD CONDITIONS

• 2. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used to achieve compliance. If necessary, this shall include the operation and maintenance of backup or auxiliary systems.
Responsibility of an Inspector?

a. The SWPPP must identify a person knowledgeable and experienced in the application of erosion and sediment control BMPs who will oversee the implementation of the SWPPP, and the installation, inspection and maintenance of the erosion and sediment control BMPs before and during construction, until final stabilization is achieved.
• A knowledgeable and experienced person is someone who meets the requirements of this permit.
1) On-site personnel must understand the requirements of this permit as it pertains to their role in implementing the SWPPP.

a. The purpose of the SWPPP, requirements of the SWPPP, and how the SWPPP will be implemented;

b. The location of all BMPs identified in the SWPPP;

c. Correct installation, function, and maintenance of BMPs identified in the SWPPP.
7. **Inspections.** The SWPPP must provide for site inspections. The permittee shall ensure that personnel conducting site inspections are familiar with permit conditions and the proper installation and operation of control measures. Inspectors must be knowledgeable in their role of the SWPPP, as outlined in this permit.
The erosion and sediment control measures and stabilized areas identified in the SWPPP shall be observed to ensure they are operating correctly and in serviceable condition.
Inspections shall include areas used for storage of materials, permanent stormwater control measures and vehicle maintenance areas. These areas shall be inspected for evidence of, or the potential for, pollutants entering a drainage system.
If necessary, the plan shall be revised based on the observations and deficiencies noted during the inspection.
III. SELF MONITORING AND REPORTING

A. Inspection and Maintenance Requirements

1. Inspections shall be performed at least once every 14 calendar days and within 24 hours after any storm event of greater than 0.25 inches of rain per 24-hour period during active construction.
Inspections are only required during normal working hours. The permittee shall use a rain gauge on-site or utilize the nearest National Weather Service precipitation gauge station. Rain gauge locations or stations must be representative of the site.
a. “Within 24 hours after any storm event greater than 0.25 inches rain per 24-hour period” means that you are required to conduct an inspection within 24 hours once a storm event has produced 0.25 inches, even if the storm event is still continuing. If there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.
It’s been discharging everyday for the last week. How many inspections should I have?

Is the truck a permitted discharge?
2. Adverse climatic conditions, such as flooding, high winds, tornadoes, electrical storms, site access constraints, etc., may prohibit inspections.

Storm events may also occur outside of normal working hours. The permittee must include a description of why the inspection(s) could not be performed at the designated time in the next inspection record. If a rain event occurs outside of normal working hours, an inspection must be conducted during the next working day.
4. All inspections conducted during construction must be recorded in writing and these records must be retained in accordance with Part III(B). Records of each inspection activity shall include:

a. Date and time of inspections;
b. Name of person(s) conducting inspections;
c. Findings of inspections, including recommendations and schedule for corrective actions;
d. Date and amount of all rainfall events greater than 1/4 inch (0.25 inches) in 24 hours; and

e. Documentation that the SWPPP has been amended when changes are made to BMPs in response to inspections.
Make Sure Your Inspection Forms Meet All Your Permit & Contract Requirements!

www.ndhealth.gov/wq/storm/construction/constructionhome.htm
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Corrective Actions and Schedule:**

- Are best management practices effective to minimize the discharge of sediment from the site?  
  - Y  
  - N
- Do best management practices need to be adjusted?  
  - Y  
  - N
- Are additional best management practices needed?  
  - Y  
  - N

**List all spills, leaks or hose-breaks that have occurred since the last inspection:**

<table>
<thead>
<tr>
<th>Size</th>
<th>Location</th>
<th>Was it reportable?</th>
<th>Was it reported?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y  N</td>
<td>Y  N</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y  N</td>
<td>Y  N</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y  N</td>
<td>Y  N</td>
</tr>
</tbody>
</table>

- Were Spill Prevention Procedures adequate?  
  - Y  
  - N
- What Spill Response Procedures were used?  
  - Comments

- Has the SWPP Plan been updated as a result of this inspection?  
  - Y  
  - N
- Has the Site Map been updated as a result of this inspection?  
  - Y  
  - N
a. All control devices similar to, and including, silt fence or fiber rolls must be repaired, replaced, maintained or supplemented when they become nonfunctional (torn from posts, visible tears, etc.). Collected sediment must be removed as it approaches 1/2 of the above ground capacity of the control device. Repairs must be made prior to the next anticipated rainfall event or within 24 hours of discovery (whichever comes first), or as soon as field conditions allow access. Documentation must be provided in the maintenance records if field conditions do not allow access along with a plan of action for performing maintenance activities.
f. All inspection reports shall be signed in accordance with Part IV(A)(6) of this permit.
5. Corrective actions (maintenance activities) performed during construction must be recorded in writing and these records must be retained in accordance with Part III(B).
Corrective Actions:
Records for maintenance activity shall include:

a. Best Management Practice corrected;
b. Date and time of corrective action;
c. Name of person(s) performing corrective actions;
d. Corrective actions taken; and
e. Corrective actions/maintenance records shall be signed in accordance with Part IV(A)(6) of this permit.

Corrective Actions and Schedule:

> Are best management practices effective to minimize the discharge of sediment from the site? □ Y □ N
> Do best management practices need to be adjusted? □ Y □ N
> Are additional best management practices needed? □ Y □ N

Comments:
6. Completed areas that have been stabilized but do not meet the 70 percent perennial vegetative cover criteria for final stabilization may be inspected once per month. Inspections may be suspended for parts of the construction site that meet final stabilization requirements of Part II(E) of this permit. The SWPPP must update to identify any areas which meet this condition.
7. Inspections may be suspended where earthwork has been suspended due to frozen ground conditions. The required inspections and maintenance must resume as soon as runoff occurs or the ground begins to thaw at the site. The permittee must record freeze/thaw and runoff dates as part of the inspection records.
IV. STANDARD CONDITIONS

6. Signatory Requirements

All applications, reports, or information submitted to the department shall be signed and certified.

All permit applications shall be signed by a responsible corporate officer, a general partner, or a principal executive officer or ranking elected official.

All reports required by the permit and other information requested by the department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described above and submitted to the department; and

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility,
b. Fiber rolls must be replaced when 1/2 of the original above ground height of the device when it was installed has been lost as a result of flattening or other damage.
c. Sedimentation basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches 1/2 the storage volume. Drainage and removal must be completed within 72 hours of discovery, or as soon as field conditions allow access. Documentation must be provided in the maintenance records if field conditions do not allow access along with a plan of action for performing maintenance activities.
d. Maintenance and cleaning of inlet protection devices must be performed when sediment accumulates, the filter becomes clogged, and/or performance is compromised.
2. Surface waters, including drainage ditches and conveyance systems, must be inspected for evidence of sediment deposited by erosion. Permittees must remove all deltas and sediment deposits in surface waters, drainage ways, catch basins, and other drainage systems. Areas where sediment removal results in exposed soil must be stabilized. Removal and stabilization must take place immediately, but no more than, seven (7) calendar days after the discovery.
3. Vehicle tracking of sediment from the site must be minimized by BMPs. This may include having a designated egress with aggregate surfacing from the site or by designating off-site parking. Permittees are responsible for (or making the arrangements for) street sweeping and/or scraping if BMPs are not adequate to prevent sediment from being tracked onto the street from the site.
Accumulations of tracked and deposited sediment must be removed from all off-site paved surfaces by the end of the work day, shift or if applicable, within a shorter time specified by local authorities or the department.
4. If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts (e.g., fugitive sediment in streets could be washed into storm sewers by the next rain event and/or pose a safety hazard to users of public streets).
5. Vegetative buffers must be inspected for proper distribution of flows, sediment accumulation and signs of rill formation. If a buffer becomes silt covered, contains rills, or is otherwise rendered ineffective, other control measures shall be implemented. Eroded areas shall be repaired and stabilized within 24 hours of discovery, or as soon as conditions allow access.
1. Properly handle construction debris and waste materials.

a. Debris and waste must be handled appropriately until disposal. Litter and debris shall be collected and stored to reduce the potential for wind and water to carry the materials off-site or leachate discharging from a site. Collected material shall be taken to the appropriate facility for disposal or recycling.
2. Wash water containments must be cleaned out (solids and liquid) before 80 percent of storage capacity is attained.
3. Best management practices used in surface waters must be cleaned immediately to prevent the transfer of aquatic nuisance species.
4) In addition to the inspection requirements in Part III, dewatering activities shall be inspected daily. The inspection must include the dewatering site, areas where BMPs are being implemented and the discharge location. A record shall be maintained to document the inspections of the dewatering operation and actions taken to correct any problems that may be identified.
Will this be your Best Defense?
SWPPP is a “Living Document”

- Mark up the plans with changes
- Date and initial the changes
SWPPP Site Map
Complex Site
Is there a detail in the SWPPP for this?
On DOT&PF projects provide a citation to the BMP Manual or publication used as a source for the BMP. If no published source was used, then the SWPPP or SWPPP amendment must state that “No published BMP manual was used for this design.” Include a drawing and description when designing a BMP.
Describe the sequence and timing of activities that disturb soils and of BMP implementation and removal. Phase earth disturbing activities to minimize un-stabilized areas, and to achieve temporary or final stabilization quickly.

Prior to embankment fill:
1- Install Perimeter berm at OHW
2- Place 4 “ gravel filter layer on berm

Upon completion of the approach fill:
1- Place geotextile fabric
2- Place rip rap on slopes

See detail Plan sheet xxxxx
Example DOT&PF BMP

No published BMP manual was used for this design.
Designed by Danny Dirt PE, AK-CESCL #007
What should the inspection report say?

Have you signed reports stating that you are in compliance with the SWPPP & Permit?
High Turbidity & Oil Sheen

What do you report?
WHAT BMP’s ARE NEEDED FOR COMPLIANCE?

What do the grading logs say?
SILT FENCE BLOWOUT

• SAND BAGS ADDED TO REINFORCE
• GULLY FORMING
SAME SILT FENCE FROM THE OTHER SIDE

• IS THERE A PROBLEM?
• WHAT SHOULD BE IN THE REPORTS?
Fugitive Dust
What is on the inspection report?
Inspection takes time

Predicting problems takes skills

Observation builds experience!
Inspection Report Exercise
Where does this go?

SW Drain Inlet

Anchorage
Is this what's on the plan?
Is this installed properly?
Will this work long term?
Site Map
Check Dam
Specifications – BMP description
Construction Materials
Any Concerns?

Access Road

Concrete washout
2. Wash water containments must be cleaned out (solids and liquid) before 80 percent of storage capacity is attained.
West Side Pad

Not Properly Installed
Eye Candy?

NE approach Compost Sock
Bridge North Side

How effective is this?
Compost Sock

Waters of the U.S.

Why is this sediment here?
Installed properly?
NW approach Compost Sock

Not Properly Installed
Does the installation match the details?
NW embankment toe Straw Wattle
Inspection Locations
Inspection involves walking the line....
& Checking all the BMP’s along the way.
Liability Issues for Inspectors

What you are required to do:

– Conduct and document inspections
– Assess BMP performance
– “I certify that this report is true, accurate, and complete, to the best of my knowledge and belief.”
– Determine compliance with SWPPP & Permit
– Detail summary of remedial actions

What you will probably be expected to do:

– Ensure regulatory compliance

If so....
Always sample and report accurately and promptly
Define Inspectors role in contract, and READ THE CONTRACT!

Indemnity clause?

- Some insurers require IC
- Don’t indemnify for more than what your insurance/professional liability policy covers (unless you have deep pockets).
- Mutual indemnity
Access to Records

- **Agency & Local Jurisdiction Access**
  - Permit, Coverage Letter, SWPPP, Inspection Logs, and Discharge Data
  - Inspection & Entry by Federal, State, or local inspector with credentials

- **Public Access**
  - Copy of Records after Written Request
    - Procedures vary for various permitting authorities
  - Provide to DEC for Public Review
Inspection & Monitoring Review

Who?  “Qualified Individual”
• Does the inspection & monitoring

What?
• All disturbed areas, BMP’s, outfalls, exits, impacted areas

When?
• Every 14 days & within 24hr of a storm greater than 0.25 inches of rain per 24 hour period

Where?
• Safely located & marked locations

Why?
• Permit requirements & risk management
“Since the achievement of our independence, 
He is the greatest Patriot, 
who stops the most gullies.”

-1736 – 1799
-Introduced the Stamp Act
-1st post-colonial Governor of Virginia
-Give me liberty or give me death

-Patrick Henry
Be Prepared for your Inspections
Plan for your Inspections
Complete your Inspections
Remember,
An inspection is a snapshot of the construction process.

The SWPPP is the movie of the whole process. It is a critical element for defending your position, should you need it.
Inspection report

Practice Time:
Inspection:
Perimeter Controls

Current site Map

Note:
✓ BMP locations
No Perimeter Control
Unnecessary BMP’s
Copies of the SWPPP, inspection records, all reports required by the permit, and records of all data used to complete the NOI must be retained for a period of at least 3 years from the date that permit coverage expires or is terminated.
Inspection: What next?

• Review SWPPP for permit compliance
• Change SWPPP within 7 days if necessary
• Implement / maintain BMPs
  – Within 24 hours / 7 days

Document BMP maintenance/addition in log book
8.2.1.1 For conditions that are easily remedied (i.e., removal of tracked sediment, maintenance of control measures, or spill clean-up), the permittee must initiate steps to correct the problem within 24 hours and correct the problem as soon as possible; or

8.2.1.2 If installation of a new control measure is needed or an existing control measure requires significant redesign and reconstruction or replacement, the permittee make it operational within 7 calendar days from the time of discovery of the need for the corrective action, unless it is not practicable.
• Maintain BMPs to assure continuous performance. See specific BMP specifications and maintenance requirements in approved Erosion and Sediment Control Manuals

• Check sediment control BMPs weekly and after runoff events in dry season and daily in wet season during discharge

• Remove temporary BMPs 30 days after site stabilization

Advice to inspectors:
Bad Stuff:
- Garbage
- Perimeter control
- Bare soil
- Maintenance

Good Stuff:
- Rain drains
- Rock driveways
- Clean streets
Good Stuff:
✓ No Tracking
✓ Grass Lined Swale
✓ Vegetation Established

Bad Stuff:
✓ Highway Missing in Both Directions
✓ Off ramp relocated to Downstream Location
✓ Repair Costs ???
Self Reporting & Policing

Photos Courtesy WADOE
BMP Damage Results In Sediment Discharge
Perimeter Sediment Control & Discharge Point
Indication of Slope Failure Under the Blanket
GUTTERS & RAIN DRAINS?

✓ PLASTIC SHEETING ON SLOPES
✓ STRAW ON EXPOSED SOILS
✓ PERIMETER SILT FENCE
Temporary Rain Drains

Plastic Cover

Perimeter Silt Fence
Improper Installation:
Do the monitoring reports describe & document your permit compliance or non-compliance?
What should be in the monitoring report?
What action should be taken?
Visual Inspection:
High Turbidity, Why did the tree fall down? Is there a flow rate problem here?
During a site inspection, a permittee must inspect the following:

• Areas disturbed by construction activity
• Areas used for storage of materials that are exposed to precipitation
• Areas where control measures are installed and maintained, BMP’s
• Areas where pollutants have accumulated and may enter storm water
• Locations where vehicles enter or exit the site;
• Areas where storm water typically flows;
• Points of discharge from the site.
• Portions of the site where stabilization measures have been initiated.
6.4.2 Scope of Inspection
The site inspection shall include the following:

6.4.2.1 Check whether all control measures are installed and operating as intended and determine if any control measures need to be replaced, repaired or maintained.
6.4.2 Scope of Inspection
The site inspection shall include the following:

6.4.2.2 Check for the presence of accumulated sediment near the project area boundary that has a potential for being washed outside of the project boundary on locations such as roadways or parking lots, storm water conveyance systems, storm drain inlets, and discharge points.
6.4.2 Scope of Inspection
The site inspection shall include the following:

6.4.2.3 Check for the evidence of, or the potential for spills, leaks, or other accumulations of pollutants on the site entering the storm water conveyance system or waters of the U.S.
6.4.2 Scope of Inspection
The site inspection shall include the following:

6.4.2.4 Describe visible areas where erosion has occurred near the project area boundary that has a potential for being washed outside of the project boundary
6.7.1.8 Location(s) where additional control measures are needed that did not exist at the time of inspection; and
6.7.1.9 Corrective action required, if any, including complete-by dates.
6.7.1.5 Location(s) of discharges of sediment or other pollutants from the site;
6.7.2
The inspection report must be signed in accordance with Appendix A, Part 1.12.
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SWPPP DELEGATION OF SIGNATURE AUTHORITY
FOR CGP DOCUMENTS – DOT&PF

Project Name:
6.4.2 Scope of Inspection
The site inspection shall include the following:

6.4.2.5 Identify any locations where new or modified control measures are necessary to meet the requirements in Part 4.0
6.4.2 Scope of Inspection
The site inspection shall include the following:

6.4.2.6 Identify all points that discharge from the site and describe the conditions that are contributing to that discharge.
6.4.2 Scope of Inspection
The site inspection shall include the following:

6.4.2.7 Any incidents of noncompliance observed and corrective actions taken pursuant to Part 8.0.
6.2.2 If portions of the site have achieved final stabilization but construction activity remains on other portions of the site, a permittee may suspend inspections for those portions that have achieved final stabilization; however, the permittee may need to conduct subsequent inspections within two business days of the end of a storm event at actively staffed sites that results in erosion and causes a discharge from that portion of the site previously considered finally stabilized;
Temp Fence

Wattle Reinstalled 7/6/10
Removed 7/21/10
Reinstall 7/24/10

Plastic installed 6/10/10
Removed 6/8/10
Reinstall 7/24/10

Pile line

S/TIC Curtain
Exposed Soils
Perimeter Controls
End of Sediment Barrier

Fairbanks
The accumulation or tracking of sediment in or near any storm water conveyance channels, on roadways or parking lots outside the project area and adjacent to the site, in the immediate vicinity of control measures at discharge points or entry points into the storm sewer system, or in other areas of the site.

Translation: See sediment – Take Corrective Action

Anchorage
A permittee must modify the SWPPP, including site map(s):

5.9.1.1 Whenever changes are made to construction plans, control measures, good housekeeping measures, monitoring plans, or other activities at the site. This includes changes made in response to corrective actions.

5.9.1.2 If inspections determine that SWPPP modifications are necessary for compliance with this permit; or

5.9.1.3 To reflect any revisions to applicable federal, state, tribal, or local law that affect the control measures at the site.
5.9.2 Log of SWPPP Modifications

A permittee must keep a log showing dates, name of person authorizing the change, and a brief summary of changes for all significant SWPPP modifications (e.g., adding new control measures, changes in project design, or significant storm events that cause for the replacement of control measures).

<table>
<thead>
<tr>
<th>Amendment Number</th>
<th>Description of the Amendment</th>
<th>Date of Amendment</th>
<th>Amendment Prepared by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Install TRM @ culvert #5 in flow area</td>
<td>7-14</td>
<td>S. Smith</td>
</tr>
<tr>
<td></td>
<td>Date Must be 7 days after inspection</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>