

US EPA STORMWATER REGULATIONS AND THEIR IMPACT ON COTTON GINS**J. Kelley Green****Texas Cotton Ginners' Association****Austin, TX****Roger A. Isom****California Cotton Ginners' Association****Fresno, CA****Phillip J. Wakelyn****National Cotton Council of America****Washington, DC****Dennis S. Findley****Southeastern Cotton Ginners Assn.****Dawsonville, GA****Abstract**

Compliance with the storm water rules (40 CFR 122, 123) is something cotton gins did not face until after the general permit requirements were released in July 2003. Although gins are a very small part of the overall storm water picture, gins are subject to the rules, if they have a construction project that disturbs over one acre of land. While the penalties for non-compliance can be substantial, the costs of obtaining a permit and putting a plan into place are fairly minimal. The plan can be done in a fairly reasonable amount of time. However, it is important that these rules and their impact on your operation are fully understood, before beginning a major construction project.

Introduction

Stormwater discharges are generated by runoff from land and impervious areas such as paved streets, parking lots, and building rooftops during rainfall and snow events that often contain pollutants in quantities that could adversely affect water quality. Most stormwater discharges are considered point sources and require coverage by a National Pollutant Discharge Elimination System (NPDES) permit. The primary method to control stormwater discharges is through the use of best management practices (BMPs).

In response to the 1987 Amendments to the Clean Water Act (CWA), the U.S. Environmental Protection Agency (EPA) developed Phase I of the NPDES Stormwater Program in 1990 (40 CFR 122, 123; http://cfpub.epa.gov/npdes/home.cfm?program_id=6). Under Phase I, EPA required NPDES permit coverage for stormwater discharges from municipal separate storm sewer systems located in incorporated places or counties with populations of 100,000 or more; and 11 industrial activities and construction activity which disturbs five or more acres. Industrial facilities, such as cottonseed oil mills, feed mills, and textile mills, were required to implement practices which would reduce the contamination of storm water as it fell onto, and then ran off, the site where the industrial facility was located. The definition of industrial facilities under this rule is fairly specific, and does not include cotton gins or grain elevators. The rule allows for the exclusion of certain sources from the national program based on a demonstration of the lack of impact on water quality and facilities that have “no exposure” of industrial activities or materials to storm water. Some cottonseed oil mills are excluded because of this.

The Phase II “Final Rule NPDES – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges” (64 FR 68722; December 8, 1999) expanded the existing NPDES storm water program (Phase I) to address discharges from small municipal separate storm sewer systems and construction sites that disturb 1 and 5 acres of land (i.e., small construction activities).

According to EPA, storm water runoff from construction activities can have a significant impact on water quality. As storm water flows over a construction site, it picks up pollutants like sediment, debris, and chemicals. Polluted storm water runoff can harm or kill fish and other wildlife. Sedimentation can destroy aquatic habitat and high volumes of runoff can cause stream bank erosion.

Since cotton gins were not subject to the Phase I storm water operating permit rules, gins were not required to obtain NPDES permits, and were not required to implement BMPs in order to meet an NPDES permit. Construction activities had to disturb more than five acres and fortunately, most construction activities at cotton gins don't disturb more than five acres. The stormwater issue was thoroughly reviewed and discussed in the early 1990's, and was then put on the "back shelf" since gins would only rarely be affected by this rule.

However, in 1999 when the "Phase II" rules were promulgated, and additional requirements were put in place for construction activities disturbing as little as one acre, the construction of a cotton gin or grain elevator could be subject to the stormwater rules. On July 1, 2003 (68 FR 39087), EPA issued the "Final NPDES General Permit for Storm Water Discharges Associated with Construction Activities". Under this general permit, the requirements changed and operations like cotton gins and grain elevators could be directly affected. In this final general permit, instead of a five acre threshold, the threshold of one acre became effective. While not many cotton gin construction sites involve the disturbance of five acres or greater, there are some large projects that disturb more than one acre. *So, any construction activity that disturbs a land area over one acre must meet these Storm Water General Permit requirements.*

Construction Activity General Permits

The basic idea of the construction activity permit is to identify where the runoff from your property will go in the event of a storm, and to minimize the amount of dirt and other contaminants (e.g., from the portable toilets) in this runoff when it leaves your facility. This permit and the procedures associated with it need to be in effect before the construction project begins. The need for this permit will end when the construction is complete and the yard has been stabilized with the items identified in your plan. For example, if the permit includes planting grass behind the new gin, and putting gravel on all the travel areas, the plan will be complete when the construction is complete, the gravel installed, and the grass is sprouted and growing.

The details for complying with the General Permit vary some from state to state, but the basic requirements are the same. There are generalized requirements, but your local association or your regulating entity should be contacted to be sure of how these rules are implemented in your state.

The ***first step*** is to file the appropriate paperwork with the EPA or with your state office. Gins in New Mexico will deal directly with federal EPA. Gins in all other cotton growing states will deal with their respective State Environmental Agencies. In most cases, the filing involves filling out a Notice of Intent (NOI), or a General Permit application. This application is usually fairly simple, requiring basic company information and a fee. You will usually receive some sort of documentation that you have completed this filing, which you must include in your plan.

The next step is to develop your ***Storm Water Pollution Prevention Plan (SWPPP)***. In most states you will not have to file the actual plan that you put in place, but you are required to put the plan together, and are required to keep documentation on site, which shows all the details of your plan. The documentation for this SWPPP plan will typically be kept on site in a notebook.

The typical contents of the SWPP plan

- 1) Copy of the NOI or application filed with the state or EPA.
- 2) Copy of any other Notices or permits associated with the above NOI, such as any general permit issued by the regulatory agency.
- 3) Certification that plan was prepared by a responsible person in accordance with the applicable rules and regulations.
- 4) Name and contact information for responsible party.
- 5) Project overview or background, as required by the various agencies. This overview will have specific requirements, and most of this information will be provided directly from the regulatory agency. Some of the typical requirements would be:

- a. Definitions of terms
- b. Description of Permit Applicability and Coverage
- c. Standard Permit Conditions
- 6) A list of potential pollutants. This list is typically fairly simple, and will contain items such as portable or above ground diesel tanks, road bed material, portable toilets, dumpsters and garbage tanks, and concrete wash out from trucks.
- 7) Site Location and Plot Maps. These maps should show the location of all potential pollutant items above, plus the location of all new structures, and the indication of drainage patterns. You also must identify where the water goes after it leaves your property, including the location of all site discharge points, and the location of all structural erosion controls and planned stabilization practices. In the case of the gin, you can probably use your existing site plan, then simply add grade information, with the location of any runoff points, and the identification of any silt fences or hay bales used to control the runoff points. Finally, you will need to identify the areas that you plan to stabilize with grass or other materials after construction, and the areas that will be graveled or covered with other materials for traffic areas when the project is complete.
- 8) Description of erosion and sediment controls. This will include items described on maps, such as silt fences and hay bales. It may also include a rock bed at the entrance of the facility, and the preservation and/or re-planting of vegetation on the property.
- 9) Description of the maintenance procedures to be employed. This will typically be a common sense description of how you are going to document that your plan is being implemented, and is working. It will probably include a description how inspections and repairs will be completed.
- 10) Discussion of housekeeping procedures to be employed. The majority of this discussion will probably center around keeping trash picked up and properly disposed of.
- 11) Inspections. Weekly inspections of all stormwater controls is required in some areas. A checklist may be required and/or made available from the state. If one is available, it is strongly suggested that you use this checklist to document the fact that you are walking through the site each week, and making any necessary repairs.
- 12) Repairs. There are typically requirements for the amount of time you have to complete repairs to any damage caused by storms or other events. As a general rule, the timeliness of these repairs will be documented on the inspection sheets.
- 13) Records of this program must typically be retained for three years.

In addition to the above information kept in your office, there is generally a site notice that must be posted at the entrance to your facility. This is typically posted on a piece of plywood in a bulletin board format. Be sure to put it on posts substantial enough to discourage truckers and other visitors from running over the sign.

Discussion

The control of stormwater runoff is not a highly technical issue. It is also not normally complex, especially in areas that are fairly arid and/or flat. This program is in place across the US, however, and fines can be substantial, if the rules are not followed.

Much of the information needed to complete this type of permit is supplied by the state agencies, and simply must be assembled by the owner or operator of the facility. The only real technical work to this permit is the identification of runoff points, water flow patterns, and possible sources of contamination, plus the design of a control strategy to address these issues.

This is one rule that affects cotton gins in almost the same manner as any other facility. While there is a lot of difference in controlling air emissions from a cotton gin versus a dry-cleaning operation, the storm-water prevention plans for the construction phase of the project will actually be very similar.

This similarity has several implications. First of all, if you are using a contractor to do your concrete and building work on a major project, you may be able to get them to put the stormwater plan in their bid, as a part of their work. Since this plan is similar for all types of construction, any major contractor probably has some experience

with this type of permit. They may even have all the plans and programs already put together, so that the cost of having a contractor complete this type of permit may be fairly reasonable.

At the same time, if your state agency has a small business assistance program, this is the type of permit that they will typically be of significant assistance. Even if their staff is not familiar with a cotton gin, the permit will be similar to that of any other industry that has a small site that they are located on.

On the flip side, your State Enforcement officers will also be similarly familiar with these programs, even if they have never seen a cotton gin. If you get a new inspector who has no experience with gins, this program may be the one item where he can show that he knows the proper application of the rules at your facility.

Summary

In summary, compliance with the EPA storm water rules is something cotton gins have not been faced with in the past. Although gins are a very small part of the overall storm water picture, gins are still subject to the rules, if they have a construction project that disturbs over one acre of land. While the penalties for non-compliance can be substantial, the costs of obtaining a permit and putting a plan into place are fairly minimal, and the plan can be done in a fairly reasonable amount of time. *It is important to fully understand these rules, and their impact on your operation before beginning a major construction project.*