

# North Carolina Division of Water Quality Response to Comments and Summary of Final Changes to NPDES Stormwater and Wastewater General Permit NCG020000 (2009 Renewal)

## Background

NPDES General Permit NCG020000, which regulates **stormwater and wastewater** discharges from nonmetallic mineral mining activities (SIC category 14xx), expired on December 31, 2009. The North Carolina Division of Water Quality (DWQ) announced in selected newspapers across the State on or about May 12, 2009 that the draft of the proposed renewal General Permit would be posted on our website for public comment in October. DWQ also ran this notice in the North Carolina Register the same month; on the Stormwater Permitting Unit website on May 15, 2009; as well as in renewal letters to all affected permittees.

DWQ revises and reissues NPDES stormwater General Permits on a five-year schedule. Every five years we review collected analytical data from the previous five-year term of the permits; evaluate identified compliance problems and problems in our enforcement of the permits; and seek to improve the effectiveness of the permits as stormwater management tools for the permittees.

The draft NCG020000 permit and Fact Sheet were posted to the Stormwater Permitting Unit's website on October 13, 2009. The public comment period closed on November 12, 2009. During this time, DWQ staff received two written comment letters regarding the proposed draft permit. The Division also received other comments from the North Carolina Aggregates Association (NCAA) via e-mail about the proposed draft. The Division also received comments internally from both Regional Office and Central Office staff.

EPA Region IV staff in Atlanta was sent the draft General Permit on October 5, 2009. On December 4, 2009, EPA Region IV responded that the agency concurred with no comments. EPA's additional review and approval would be necessary if the proposed final General Permit incorporated significant changes from the draft or if significant public comments objecting to the permit were received. DWQ concluded that neither of these criteria was met and therefore, further EPA review is not required.

DWQ has prepared this summary document both for those interested parties that have submitted written comments on the draft General Permit, as well as for other interested parties. This document will be posted on our website for public access.

## Comments and Responses

DWQ received written comments from two parties on the draft General Permit during the announced public comment period. We appreciate the time and effort reflected in the comments. The comments have been bolded and arranged by topic, with DWQ's response presented in italics below. We have noted which comments have been addressed to some

degree in the final version of the General Permit. We have also identified those comments that we rejected and the basis for doing so.

- 1. Turbidity monitoring.** Both commenters expressed concern about the confusion regarding changes to turbidity monitoring. Specifically, the turbidity “cut-off concentration” for the discharge had been removed, and instead of a benchmark, the draft permit outlined that the stormwater discharge will not cause a water quality standard violation (which varies according to receiving water classification and background levels). The comments indicated confusion about whether the permittee was responsible for monitoring up- and downstream (U,D) of the discharge. One commenter contended that the permittee should not be required to collect “two extra” samples, particularly when access to receiving waters may be inhibited by adjacent property not owned by the mining operator. The comments asked for more clarification on the turbidity testing requirements.

**Response:** *Turbidity is a potential pollutant in stormwater and wastewater from all mining operations, and wastewater turbidity monitoring by the mining industry is stipulated in the North Carolina Rules in 15A NCAC 2B .0500. DWQ determined that imposing a benchmark or effluent limit based on instream water quality standards was not always appropriate but had no alternative value for this parameter, except instream. DWQ has accommodated the concern that permittees must take ‘extra’ samples in other locations by allowing the permit holder the option to choose whether he will monitor the discharge or U,D sample points. However, this does not rule out the possibility that the Regional Office may require the permittee to monitor up- and downstream points if problems bring the mining operation into the tiered responses.*

*DWQ retained the turbidity monitoring requirements as proposed in the final permit, with the exception that the **option** to monitor up- and downstream (U,D) was expanded to the stormwater discharges as well. The language was also modified in both wastewater and stormwater monitoring sections to clarify that the permit simply requires compliance with the water quality standard instream and does not mandate U,D monitoring at the outset. We have also included information about this requirement in our Technical Bulletin.*

- 2. Monitoring the stormwater discharge for all parameters in the Tiers rather than just the one that exceeded the benchmark.** One commenter asked why a turbidity benchmark exceedence (instream) should result in the permittee sampling for *all parameters* on a monthly basis.

**Response:** *First of all, this requirement is consistent with the other industrial permits in our program. Because some parameters would only be sampled semi-annually, the variability in those concentrations would be overlooked during a monthly sampling regime when a facility is trying to assess effectiveness of response actions. Finally, the tiered structure in the permit does allow flexibility for DWQ to **reduce** monitoring*

*frequency for some or all parameters if data or other information supports an argument for less monitoring. DWQ has not changed the requirement in the final permit.*

*We realize that the monitoring response is different for wastewater monitoring (which still only requires just the parameter that exceeded a limit be tested for monthly). Because effluent limit violations carry the possibility of enforcement actions and/or fines, this monitoring scheme reduces the punitive risk to the permittee while still encouraging prompt corrective action.*

- 3. The newly introduced "Stormwater Pollution Prevention Plan" SPPP that replaces the "Best Management Practices (BMP) Plan."** One commenter asserted the SPPP is much more detailed than the previous BMP Plan required under NCG020000 and offers "dubious if any real benefit." Related to this topic, the commenter also offered the opinion that the Spill Prevention Response Plan (SPRP) offers no benefits beyond the current [federal] Spill Prevention, Control, and Countermeasure (SPCC) Plan requirements. Another comment identified erroneous references to the "BMP Plan" required by the older NCG020000 permit in the draft, which replaced the BMP Plan with a more comprehensive SPPP requirement.

**Response:** *DWQ disagrees that an SPRP offers no benefits beyond the SPCC. The SPCC is a federal requirement for oil spill prevention and awareness. The SPRP must address more than just petroleum products (even if the majority of the chemicals on the site fall in that category), and it must include stormwater management concerns. For example, how do procedures differ if a spill occurs during a rain event? Are drainage area stormwater structures inspected after a spill? While much of the information might be found in an SPCC (which can be part of the SPRP), the basic requirements of an SPCC are not sufficient. DWQ also notes that operations with storage thresholds below the federal requirement are not required to prepare an SPCC (but the requirement for an SPRP still applies). DWQ has retained the SPRP requirement in the final permit.*

*DWQ noted the mistaken reference to "BMP Plan" and has removed all erroneous references in the final permit. Instead, the final permit only refers to the SPPP where appropriate. The SPPP still contains the component called a "Stormwater Management Plan," of which a "BMP Controls Inspection and Maintenance" is a part.*

- 4. Inactive sites monitoring.** One commenter suggested that the proposed BMP inspection schedule for "inactive mines" is impractical because it still requires inspection within 24 hours of a 0.5 inch or more rain event. The commenter offered no alternative suggestion.

**Response:** *DWQ met with the industry on several occasions to discuss ideas about what was a reasonable expectation for maintaining vigilance at "inactive" mining sites. The*

*proposed draft reflects the ideas discussed at the August and September meetings with industry representatives. DWQ concluded that the reduced inspection schedule as proposed is not excessive and will ensure the integrity and effectiveness of stormwater BMPs at inactive sites.*

*DWQ has retained the draft version of this requirement.*

- 5. Approval of Representative Outfall Status (ROS).** One comment stated that approval of representative outfall status would be burdensome to both the State and permittee.

***Response:** Representative Outfall Status has been an option for NCG020000 permittees to reduce analytical monitoring obligations for some time and has always been subject to prior DWQ approval. In 2008, DWQ streamlined the process and transitioned the approval of ROS requests to the Regional Offices to expedite final determination. This change was intended to rectify past instances of long delays or non-response by the Central Office, and to integrate a regional inspector's site visit into each request. To date, we find the changes have improved the ROS approval process significant for both the State and the permittees. In addition, the proposed draft NCG020000 introduced the flexibility of allowing stormwater outfalls to be representative for qualitative (visual) monitoring as well, at the Region's discretion. DWQ feels these actions have made the matter of approval of ROS significantly more flexible and efficient.*

*DWQ has retained the draft version of this requirement.*

- 6. Requirement to track "New Motor Oil Usage" for vehicle maintenance activities.** One comment asserted that there was no demonstrated need or benefit to do this.

***Response:** While the previous NCG020000 permit did not include this 'parameter' in the monitoring table, the permit still required "Facilities which have any on-site vehicle maintenance activity that uses more than 55 gallons of new motor oil per month when averaged over the calendar year" to perform analytical monitoring. To know whether analytical monitoring was required, the permittee still had to estimate whether the average amount used per month exceeded the 55 gallons. No changes to this requirement were proposed with this renewal. The only change was that an estimate of usage is required to be recorded along with analytical monitoring results. This template is also consistent with other industrial permits in our program.*

*DWQ has retained the draft version of this requirement.*

- 7. Total Suspended Solids (TSS) limit of 45 mg/l (on wastewater discharges).** One comment asserted that the 45 mg/l daily maximum limit for TSS was "a lower limit

without demonstrated need.”

**Response:** *The daily maximum TSS limit of 45 mg/l, which only applies to industrial sand mining operations, was in the previous permit. This limit is mandated by the federal effluent guidelines in 40 CFR §436, Subpart D for that industry, and DWQ retained the requirement in the final permit.*

*In the final permit, DWQ did make a change to the TSS monitoring requirement in the proposed draft—all mines must monitor TSS in wastewater discharges (instead of just industrial sand); however, it is still only industrial sand mines that are subject to the effluent limits. The basis of this change was that TSS is an expected pollutant in all of these mine discharges, and that concurrent TSS and turbidity data would be beneficial to understanding variations in these parameters at different types of mines and different regions of the state. Also, DWQ concluded turbidity limits based on the water quality standard were not generally appropriate at the discharge point but had little data with which to formulate alternatives. Because the turbidity wastewater limits that were applicable to all mines were removed with this renewal, companion TSS monitoring now applies to all mines.*

- 8. NOI signature requirements.** One commenter contended that it was unnecessary for the Notice of Intent (NOI) for this permit to be signed by a responsible corporate officer.

**Response:** *This requirement for application under this general permit has not changed since the last permit renewal. North Carolina administrative code in 15A NCAC 02H .0106 (e) and .0127 stipulate these signatory requirements for entities filing Notice of Intent applications for coverage under any general permit. Note that permit applications may be signed by principal corporate executive officers, or a “duly authorized representative, if such representative is responsible for the overall operation of the facility.” In other words, the duty may be delegated as appropriate to the general manager of the mine site, for example.*

- 9. New Annual Summary Data Monitoring Report (DMR) requirement.** One commenter expressed dissatisfaction about the new ‘Annual Summary DMR’ and burden of sending multiple copies of monitoring reports to multiple offices.

**Response:** *The draft permit proposed a requirement for the permittee to send copies of an annual summary DMR to the Central Office and Regional Office. This proposed change replaced the requirement to report all sample results within 30 days of receiving them (with the exception that benchmark exceedences or limit violations would be reported to the Central Office in the same timeframe). DWQ acknowledges that sending copies to both the Regional Office and Central Files is redundant and discussed the options internally to determine the best action.*

*The final permit altered the reporting requirement so that the mine is responsible for submitting **one** annual summary DMR to the Central Office by March 1 of every year and **one** DMR with sample results where concentrations exceed either stormwater benchmarks or wastewater effluent limits to the Regional Office within 30 days of receiving those results. This change reduces the paper copies that must be sent to multiple offices but preserves the requirement to alert the Regional Office of potential problems in the discharge(s).*

**10. The change from Oil and Grease (O&G) to Total Petroleum Hydrocarbons (TPH) for vehicle maintenance activities.** The industry commented that DWQ should reconsider TPH monitoring for vehicle maintenance activities because many labs do not provide testing for TPH by EPA Method 1664 (SGT-HEM). Requiring TPH instead of O&G will require many operations to ship off samples to different labs; now several mines are able to deliver samples in person to labs that analyze for O&G but do not perform Method 1664 (SGT-HEM). The industry asked DWQ to research the issue with its lab more extensively.

**Background:** O&G is composed of fatty matter from animal and vegetable sources and hydrocarbons of petroleum origin. TPH measures only petroleum hydrocarbons, or the narrower class of O&G that we expect to be present with vehicle maintenance activities. Laboratory analysis of TPH can be performed by a nearly identical method that is accepted for O&G measurements: EPA Method 1664 A, with an additional step that mixes the sample with a silica gel, or similar substance, to remove polar materials from the sample (typically, fatty materials that are not petroleum based). DWQ's investigation of this method revealed that on average, the cost a lab charges to provide TPH analysis by 1664 A is only \$11 more than O&G on average (with some labs not charging any more). In contrast, commercial labs in NC charge over \$100 on average to run the more specific TPH-GRO and TPH-DRO analyses. Given the usefulness as a more targeted parameter, DWQ decided to implement a template vehicle maintenance monitoring scheme with TPH. The proposed change to NCG020000 was consistent with the new strategy. (Note: General Permit NCG160000 incorporated the same change, effective October 1, 2009).

**Response to Comments:** *It is true that there are labs in the State certified for only the Standard Method 5520B to measure O&G and not 1664A. SM 5520 B and EPA 1664 A are actually very similar methods using the n-hexane extraction solvent. The 1664 method is more prescriptive in terms of required quality control and goes on to address the SGT-HEM step. SM 5520 B does not address the silica gel treatment for hydrocarbon determination.*

*DWQ's lab has advised us that labs citing SM 5520 B could easily switch to 1664 A with just some extra quality control to perform the extra steps involved. To date there has not*

*been much market for the SGT-HEM method, but more stormwater permits will be requiring TPH with 1664 A (SGT-HEM), and therefore DWQ anticipates other labs will have incentive to become proficient in running that method.*

*It is important to point out that technically, none of these labs can be certified to run EPA Method 1664 A (SGT-HEM) to analyze for TPH right now because North Carolina Certification Rules (15A NCAC 2H .0800) only list the parameter “Oil and Grease.” Elsewhere those rules list TPH-GRO and TPH-DRO certifiable by a different method (stemming from UST requirements). However, this fact does not impact the validity of the results for the purposes of analyzing and reporting **stormwater** sampling data. As long as the laboratory methods are performed in accordance with EPA procedures, NPDES stormwater permit requirements are satisfied.*

*DWQ has retained the proposed TPH monitoring via EPA Method 1664A (SGT-HEM) in the final permit.*

## **Summary of Other Changes to the Final Permit**

DWQ made other changes to the draft permit before finalizing. These changes were also minor, and DWQ concluded additional notice and/or EPA review was not necessary. The changes (in addition to those discussed above) were:

1. Part II, Section A: Language addressing authorization to construct (AtC) requirements for dewatering treatment facilities for clay pits was modified. The requirement is not restrictive to clay pits but applies generally to dewatering wastewater treatment facilities for discharges that do not meet effluent limits or protect water quality after passing through erosion and sedimentation control structures. This situation is most likely at clay mines, but other mine dewatering discharges may require more treatment as well. The reason for the change is to clarify the requirement, but the intent is not new. The change is consistent with Part I, Section B., which does not allow discharges to cause or contribute to water quality standard violations.
2. Part II, Section B: Language regarding the use of chemical flocculants has been modified to reflect more flexibility for administering polyacrylamides (PAMS) and Division concurrence for their use in treatment.
3. Part III, Section B (Analytical Monitoring for Stormwater), Table 1: Footnote 1 was revised based on comments from DWQ Regional Offices. The phrase “with reasonable and documented effort” was removed. The same phrase was also removed from the paragraph above Table 2. Instead, language addressing failure to sample during adverse weather conditions was inserted into this section. DWQ concluded these changes make the permit less vague and more instructive to both permit holders and regulators.

DWQ assumes that permittees will use good judgment as to whether or not sampling/weather conditions are safe, and that the permittee will adequately document circumstances if the ability to comply with the monitoring schedule is compromised as a result of dangerous sampling situations.

4. Part III, Section B (Analytical Monitoring for Stormwater), Table 2: Footnote 2 revised to reflect documentation and monitoring reporting requirements. Similar edits were made to the paragraph following that table. Edits were also made to that paragraph to clarify that each sample should be reported (not just “the first”)—even though it is the first valid sample results that trigger tier responses. This change avoids conflict with the permittee’s responsibility to provide data from all samples on the annual report, even if “extra” samples are collected.
5. Part III, Section B Tier Boxes: Steps were added into the Tier 1 and Tier 2 lists that remind the permittee to report monitoring results directly to the Regional Office. The possible actions by DWQ listed in the Tier 3 box also now include requiring the permittee to monitor turbidity up- and downstream. Neither of these revisions alters proposed requirements in the draft permit. (The list of actions in the draft was not limited by the bullets in the box.)
6. Part III, Section C (Vehicle Maintenance Activities): The same edits addressing failure to sample and adverse weather conditions were incorporated into this section.
7. Part III, Section D (Qualitative Monitoring): Text addressing qualitative monitoring records requirements was added to the paragraph below Table 6. Also, in the box below that paragraph, the possible actions by DWQ listed now include requiring the permittee to monitor turbidity up- and downstream. These changes were for clarity and did not alter proposed requirements in the draft permit.
8. Part III, Section E (Wastewater Discharges): This section has been reorganized, and definitions of wastewaters were added. **While the structure appears significantly different from the draft permit, the requirements have not changed substantially.** This section was restructured based on comments from DWQ Regional Offices and an effort to present the monitoring and ATC requirements more clearly.

For example, even though “Wastewater Associated with Sand/Gravel Mining” has been removed, these discharges are included by reference under both the Mine Dewatering and Process Wastewater subsections. In addition, the Process Wastewater section now includes “Other Treated Process Wastewater Discharges.” These are discharges conveyed through erosion control devices or other engineered treatment systems (other than recycle systems). While the previous permit only covered such discharges from sand and gravel mines explicitly, this change ensures the same kind of discharges

from other types of mines are also covered (i.e., does not assume all other mines will use some kind of recycle system to treat process wastewater).

9. Part III, Section E (Wastewater Discharges), ATC Requirement Boxes: Language was reworked in these boxes for clarity.
10. Part III, Section E (Wastewater Discharges), Table 7: The last column has been changed to simply refer to “All” mines to reduce confusion. Note that revisions to TSS monitoring (footnote 5) and turbidity monitoring are discussed earlier in this document.
11. Part IV, Section E (Reporting Requirements): Changes reflect data reporting requirement revisions discussed earlier in this document.
12. Part VII, Definitions: Definitions for “Adverse Weather,” “Mine Dewatering Wastewater,” “Process Wastewater,” and “Treatment Facilities” have been added. These definitions refer to terms that were in the proposed draft permit, with the exception of adverse weather (see 3.).

## **Conclusion**

DWQ’s overall intent in proposing changes to the General Permit has been to provide permit requirements that will encourage industrial permittees to respond with prompt corrective action to the discovery of pollutant discharges in excess of the benchmark values. DWQ received and considered comments on the draft General Permit and has incorporated comments, as appropriate, as indicated above.