

North Carolina DEMLR Response to Comments and Summary of Changes to NPDES Stormwater draft General Permit NCG200000 (2015 Renewal)

Background

NPDES Stormwater General Permit NCG200000, which regulates industrial stormwater discharges from scrap metal recycling facilities (a portion of SIC 5093), expired on December 31, 2014. The North Carolina Division of Energy, Mineral, and Land Resources (DEMLR) posted the proposed draft General Permit and the supporting Fact Sheet on the Stormwater Permitting Program website beginning December 15, 2014. We announced in sixteen selected newspapers across the state on or before November 30, 2014 that the draft of the proposed revised General Permit would be available on our website for public comment. DEMLR also ran this notice in the December 15, 2014 issue of the North Carolina Register.

The public comment period closed on January 15, 2015 (31 days), consistent with the regulatory minimum duration of 30 days.

DEMLR revises and reissues our NPDES stormwater General Permits on an approximately five-year schedule. Every five years we solicit public comment, especially from the particular regulated industry sector; we review analytical data from the previous five-year term of the permits; we evaluate identified compliance problems and problems in our enforcement of the permits as may be reported by our Regional Office inspectors; and we seek to improve the effectiveness of the permits as stormwater management tools for the permittees.

As required by agreement with EPA, DEMLR sent the proposed General Permit to EPA Region IV staff in Atlanta on December 15, 2014 for the agency's review. On December 23, 2014, EPA Region IV responded with no comments, other than to request an additional review of the General Permit if DENR had made significant changes in response to public comments. EPA's additional review and approval would be necessary if the proposed final General Permit incorporated significant changes from the published draft version or if significant public comments objecting to the permit were received. DEMLR concluded that neither of these criteria was met, and therefore further EPA review before final issuance was not required.

DEMLR routinely prepares this summary document both for those that submit written comments on the draft General Permits, as well as for other interested parties. This document will be posted on our website for public access.

Comments and Responses

DEMLR received only one set of comments on the proposed draft General Permit NCG200000 during the public comment period mandated by North Carolina rules. We note that we

similarly received only one set of comments on NCG20 during the previous public comment period five years earlier (2009).

In addition, DEMLR also received public comments on five other General Permits in 2013, and on another General Permit issued in 2014; together the comments covered six other regulated industrial sectors. For the sake of a consistent regulatory approach across multiple industry sectors, several of those comments received during the 2013 and 2014 General Permit renewals were incorporated into the Draft NCG20 published for public comment.

The comments in this public comment period were thoughtful and relevant to key aspects of the General Permit. We appreciate the time and effort reflected in the comments. We paraphrase those comments as listed below. We have noted which comments have been included in some form in the final version of the General Permit. We have also identified those comments that we rejected, and the basis for doing so.

- 1. Commenter suggests that the copper benchmarks of 0.010 mg/L (freshwater) and 0.005 mg/L (saltwater) are too low. Commenter asks if there are studies establishing the harmful levels of copper discharges. Commenter suggests that dissolved copper in conjunction with the receiving water hardness would be a more appropriate way to regulate the toxic aquatic impact of this heavy metal.**

Response: Federal NPDES rules require that our permits be written to monitor metals for the total recoverable amount (dissolved plus suspended) present. Copper benchmarks are derived from the one-half Final Acute Value (1/2 FAV) reported in studies from the water quality and bioassay literature. Our benchmark for total copper results from a translator equation developed by EPA that yields total recoverable values (as required by NPDES rules) but for which the inputs are generalized assumptions on the dissolved fraction, the background hardness, pH, and total suspended solids.

We note that all of our General Permits, including NCG20, are intended to cover specific industry sectors under the conditions of limited environmental risks and standardized on-site conditions and standardized state-wide receiving water conditions. For toxic heavy metals especially, in those circumstances where our standardized assumptions on the receiving water hardness, pH, and TSS might be significantly different from the actual conditions, we are amenable, on a case-by-case basis, to reviewing any permittee's circumstances with an objective of ascertaining whether alternative benchmark values are appropriate at the permittee's discharge point. We would expect to work with the permittee in such a review while the permittee is in Tier 3 status. And we would expect the permittee or his consultant to construct a persuasive argument along the lines indicated: that the receiving water characteristics would support an increased pollutant concentration beyond the 1/2 FAV from the literature while still protecting the aquatic biota. Further, and based on the site-specific circumstances, it's also possible that a persuasive argument might be constructed where in-stream concentrations already exceed action levels upstream of the site, and the site discharges

are not increasing concentrations or contributing to water quality standards violations downstream of the site. However, while we are open to a case-by-case examination of special circumstances, we continue to believe that the more protective programmatic approach is to establish the General Permit first as a broad regulatory vehicle, but to be prepared to accommodate site-specific exceptions as they may infrequently arise and as they may be shown to be justified by further consideration of receiving water conditions.

We also note that as a result of the recently completed Triennial Review of water quality standards, the proposed copper benchmark has already increased from 0.007 mg/L (previous 2009 version of the permit) to 0.010 mg/L (draft 2015 version of the permit.) This increase reflects an improvement in the relevant knowledge and methodology for assessing aquatic impacts. Note that ultimately the benchmark values are based on what concentrations of what pollutants will be detrimental to the aquatic biota, not on other considerations.

Result: The draft General Permit proposes a copper benchmark that has already been increased from 0.007 mg/L to 0.010 mg/L based on recent results of the Triennial Review. For the reasons above, we are not persuaded that an additional basis for a further increase has been established for use in the General Permit. The draft General Permit remains unchanged for the copper benchmark concentration.

- 2. Along the same lines, commenter points out that the drinking water action level for copper is 1.3 mg/L, two orders of magnitude higher than the General Permit benchmark of 0.010 mg/L. Commenter suggests that DEMLR adopt a benchmark of twice the drinking water action level.**

Response: It is important to understand that generally the stormwater discharge benchmark values are designed to protect the aquatic biota from pollutants generated at industrial sites. Consequently, comparisons to human health criteria generally are not relevant. Consider that humans routinely drink chlorinated water specifically because chlorine has been added into the water to kill selected aquatic biota. Similarly, copper chemicals have been added to drinking water reservoirs specifically to kill objectionable aquatic organisms. That humans can safely ingest chemicals in quantities toxic to aquatic biota does not argue that those concentrations should be converted into benchmarks which are intended to prevent surface water pollution and protect, rather than kill, the aquatic biota.

Result: As noted previously, the copper benchmark has already been increased from 0.007 mg/L to 0.010 mg/L based on advances in knowledge and methodology. It seems to us that additional increases in the copper benchmark have not been justified. The draft General Permit remains unchanged for the copper benchmark concentration.

- 3. Commenter suggests that the Tier 2 Response requirements are too burdensome. Specifically the requirements for monthly sampling for all parameters at the outfall where two consecutive exceedances have occurred. Commenter offers that a less burdensome approach could contain some of the following elements: sample monthly only for the parameter that was twice exceeded, not all of them; monthly sampling to be waived if appropriate BMPs have been installed; or, monthly sampling to be limited to no more than four samples per year.**

Response: *Background:* Tier 2 of the draft General Permit requires that upon two consecutive benchmark exceedances for the same parameter at the same outfall the permittee must begin monthly sampling at that outfall for all the parameters regulated at that outfall. The tier and benchmark structure (including monthly monitoring) is widely implemented as a standard part of our NPDES industrial stormwater permits that include analytical monitoring. The objective of the tier and benchmark structure is to achieve the reduction in stormwater pollutant discharges in months, rather than in years. The structure includes several flexible options for the permittee. The tier and benchmark structure is intended to involve the permittee in an increasing level of attention in feasible attempts to solve the ‘mystery’ and the discharge of pollutants above the benchmark levels. Consistent with the problem solving approach, it is important to understand that the monthly sampling requirement is intended to provide additional data as an early step in solving the problem. *The monthly sampling requirement is not intended to be punitive.* Exceeding a benchmark value is not a violation of a permit limit, and the exceedance itself is not a sufficient basis for agency enforcement actions.

Consistent with the problem solving approach, we view the monthly sampling requirement as an opportunity to gather potentially helpful information early. We have considered previously the suggestion that monthly sampling should be for only the exceeded parameter, not the full suite of parameters regulated under the permit. We disagree with this partial approach to early data gathering in a problem solving endeavor. Further, consider that the permittee’s generalized obligation is to control the discharge of all regulated pollutants into the surface waters of North Carolina at all times. Note the sequence of the Tiered structure in NCG20:

- With no exceedances the permittee continues just to sample twice per year.
- Tier 1: With one exceedance, the permittee must assess potential sources and feasible response actions. If he is successful, then he is out of Tier 1 status with the next sampling event, nominally six months later.
- Tier 2: With two consecutive exceedances the permittee again performs the Tier 1 response analysis and actions. Additionally, monthly sampling begins. The interpretation here is that the permittee’s initial attempt in Tier 1 was not fully successful, and with that information in hand he should try again to identify the source and a feasible response action. Note that the flexibility built into the permit text provides three paths out of Tier 2 status: **a) The permittee can** in the relatively short time of several months accumulate three monthly results lower

than the benchmark and drop out of the Tiered response action obligation. Or, **b) the permittee can** in the relatively short time of several months accumulate the fourth exceedance (the permittee already has two) and is then under the Tier 3 obligation to contact the DEMLR Regional Office for assistance. Or, **c) the permittee can** contact the Regional Office as part of the Tier 2 response action and essentially ask to be accelerated into Tier 3 response status.

- Tier 3: The Tier 3 status (whether arrived at normally with four exceedances, or through the permittee's request to be accelerated from Tier 2 status) allows the Regional Office staff to work with the permittee under a wide freedom of permit interpretation and actions. The Regional Office may conclude that continuing monthly sampling does not hold sufficient promise for understanding the source and achieving the reduction of discharged pollutants. Or to the contrary, the RO may conclude that additional sampling is necessary to assess the source of, or the magnitude of, or a feasible response to polluted discharges. The focus on monthly sampling is: Let's get some early data, but let's not just continue sampling with no hope of a benefit in our problem-solving mode. We want the permittee to gather some little bit of data as a potential basis for rational decision making. We do not want the permittee to gather data for no meaningful purpose.

We disagree that installing a BMP should automatically substitute for monthly sampling. However, consider that while in Tier 3 status a permittee is obligated to engage the Regional Office, and may propose a BMP in lieu of continued monthly sampling, and the Regional Office can assess the acceptability of that proposal.

We disagree with limiting monthly sampling to four times per year. Our focus in the Tier and benchmark structure is to achieve a reduction in polluted stormwater discharges within months, rather than within years. Monthly sampling can accelerate the accumulation of either the three monitoring results below benchmark (so that the permittee is dropped out of the tiered structure and back into only twice per year sampling), or the accumulation of two more results in excess of the benchmark (total of four) and the required involvement of the Regional Office staff in solving the problem.

Summary: For the reasons identified above, we continue to think that the Tier and benchmark structure, and especially including the monthly monitoring requirement in Tier 2, is an effective approach for improved control of stormwater pollution. Our feedback from some permittees, and some consultants, and our Regional Office staff is that the structure as presented has resulted in significantly improved performance during the several years of implementation starting slowly in 2007 and continuing with each subsequent batch of General Permit renewals.

Result: No change to the proposed General Permit NCG20 in response to these comments.

Summary of Significant Changes from the draft General Permit

1. We have adopted no changes to the proposed draft General Permit NCG20 based on the public comments received during the 2014-2015 public comment period.
2. As included in the section following, public comments on other General Permits from the 2013 and 2014 renewals were included in the published draft version of NCG20.
3. Public comments previously received in the 2009 public comment period for NCG20 resulted in minor changes in the 2009 version of NCG20.

Summary of Significant Changes from the Previous General Permit

1. The following minor changes appear throughout the revised General Permit:
 - a. Minor word changes, format changes, and sequencing of paragraphs;
 - b. Table of Contents reflects minor re-ordering of some sections;
 - c. Reference now to the **Division of Energy, Mineral, and Land Resources** as the permitting authority, rather than the now defunct Division of Water Quality.
2. Part I, Section B now provides that **the permittee's Certificate of Coverage is an enforceable part of the General Permit.**
3. Part II, Section A has renamed the several elements required as part of the Stormwater Pollution Prevention Plan (SPPP).
4. Part II, Section A includes minor re-wording to be more specific on the required content of several of the elements of the SPPP.
5. Part II A 2(b) now further clarifies that an **Oil Spill Control and Countermeasure Plan (SPCC) can serve to partially comply with the SPPP requirements.**
6. Part II A 3 amends the requirement to have a responsible person on site **during facility operations that have increased potential** to contaminate stormwater.
7. Part II, Sections B, C, and D **require monitoring during a measureable storm event** (new term) rather than a representative storm event (old term.) This revised sampling requirement should make it easier for permittees to obtain the required samples.
8. Part II, Section B **removes the requirement to sample for pH** in site stormwater discharges. *Basis for change:* As reported in our Fact Sheet, during the last permit cycle only eight percent of measurements of pH were outside the benchmark range of 6<pH<9. Further, we were not able to identify a likely source for pH excursions on scrap metal sites. We concluded that it is not appropriate to include monitoring of this parameter in an industry-wide General Permit intended to address pollutants likely present across the industry.
9. Part II, Section B **removes the requirement to sample for cadmium** in site stormwater discharges. *Basis for change:* As reported in our Fact Sheet, our review of the collected monitoring data from the last permit cycle revealed that in every instance of a cadmium benchmark exceedance three other monitored metals (copper, lead, and zinc) also exceeded their respective benchmarks each time. Further, we expect that any response action to address the exceedances from copper, lead, and zinc would also likely address any concurrent cadmium levels above its benchmark concentration.

10. Part II, Section B also **revises the requirement to sample for Oil & Grease by substituting Non-polar Oil & Grease**. Non-polar oil and grease is a narrower test that focuses on petroleum-based materials. We feel this is a better test parameter at these sites where animal and vegetable fats, oils, and greases are less likely to be present.
11. Part II, Section B adds **a new lower benchmark for TSS (50 mg/L)**, applicable to especially protected and sensitive waters classified as Outstanding Resource Waters, High Quality Waters, Trout Waters, and Primary Nursery Area waters.
12. Part II, Section B Table 2 has been revised to adjust the duration of the first and last monitoring periods so that the start and end dates of the intervening periods coincide with the calendar half-year dates (Jan – June, July – Dec).
13. Part II, Section D On-Site Vehicle Maintenance Monitoring Requirements has been revised to eliminate pH monitoring; to replace Oil and Grease and the 30 mg/L benchmark with the narrower parameter non-polar oil and grease with a 15 mg/L benchmark. The TSS benchmarks have been expanded to include a new lower benchmark (50 mg/L) for especially sensitive waters (ORW, HQW, Tr, and PNA).
14. The Standard Conditions in old Parts III – VI have been reorganized to be consistent with other NPDES permits Standard Conditions. All newly re-issued General Permits are being rewritten to include the elements of the new Standard Conditions. Most of the provisions are unchanged. However, some significant changes include:
 - a. Part III A 1 clarifies SPPP compliance requirements for existing facilities applying for renewal.
 - b. Federal and state law and rule citations have been added for reference in several of the paragraphs throughout the Standard Conditions.
 - c. Part III B 1 **no longer requires the permittee to submit a renewal application within 180 days of permit expiration**.
 - d. Part III, Sections B, D, and E provide new standard conditions related to the **anticipated roll-out of on-line electronic reports and electronic records**.

Conclusion

DEMLR's overall intent in proposing changes to the General Permit was to provide permit requirements that will encourage permittees to respond with prompt corrective action to the discovery of pollutant discharges indicated by visual observation or analytical results in excess of the benchmark values. DEMLR has incorporated selected public comments received during other recent (2013 and 2014) public comment periods on other recent draft General Permits where we agreed that the comments were helpful and relevant to NCG20.

END