

**Regulatory Impact Analysis for Adoption of 15A NCAC 02Q .0529**

**Rule Citation Number** 15A NCAC 02Q .0529

**Rule Topic:** Adoption of Title V Insignificant Research and Development Activities Exemption (561)

**DEQ Division:** Division of Air Quality

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**Impact Summary:** State government: No  
Local government: No  
Substantial impact: No  
Private Sector: No

**Authority:** G.S. 143-215.3(a)(1), (1a), (1b), (1d); G.S. 143-215.3A

**Necessity:** To adopt a new rule that addresses the intent of Session Law (S.L.) 2023-134, Section 12.11.(d), which requires the Environmental Management Commission (EMC) to adopt a rule that establishes an exemption from Title V permitting for research and development (R&D) activities consistent with the U.S. Environmental Protection Agency’s (EPA) position in a 1995 White Paper with guidance for states to implement their Title V programs.

# Contents

I.	Introduction .....	4
II.	Background .....	4
III.	Reason for Rule Adoption.....	5
IV.	Proposed Rule .....	5
V.	Estimating the Fiscal Impacts .....	6
A.	Private Sector .....	6
B.	North Carolina State Government.....	7
C.	North Carolina Local Governments .....	7
VI.	Conclusion.....	7
Appendix A:	Session Law 2023-134, Section 12.11.(d) .....	8
Appendix B:	Excerpt from EPA’s 1995 White Paper .....	9

## Acronyms

<b>Abbreviation</b>	<b>Term</b>
15A NCAC	Title 15A of the North Carolina Administrative Code
42 USC	Title 42 of the United States Code
AQC	Air Quality Committee
CAA	Clean Air Act
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	U.S. Environmental Protection Agency
FR	Federal Register
NAAQS	National Ambient Air Quality Standards
NC	North Carolina
OSBM	North Carolina Office of State Budget and Management
R&D	research and development
S.L.	Session Law

## **I. Introduction**

The purpose of this document is to provide an analysis detailing the fiscal impacts associated with the proposed adoption of a new rule 15A NCAC 02Q .0529, *Title V Insignificant Research and Development Activities Exemption*. The initiation of this rule was the requirement under Section 12.11.(d) of Session Law (S.L) 2023-134 for the Environmental Management Commission (EMC) to create an exemption from Title V permitting for research and development (R&D) activities to clarify additional flexibility in the rules. Appendix A provides the language contained in Section 12.11.(d) of the S.L.

## **II. Background**

The Clean Air Act (CAA) of 1963 was the first Federal legislation regarding air pollution control at a national level and was incorporated into the United States Code as Title 42 (42 USC), Chapter 85. There was a major amendment of the CAA in 1970 that established National Ambient Air Quality Standards (NAAQS) and pollution sources. The most recent amendment of the CAA in 1990 established the Title V Operating Permit program, and its implementing regulations are in 40 CFR Part 70.

On July 10, 1995, the U.S. Environmental Protection Agency (EPA) issued a guidance document titled “White Paper for Streamlined Development of Part 70 Permit Applications.”<sup>1</sup> Appendix B contains the text from Section 9 of the White Paper, which specifically addresses R&D activities. The EPA issued this guidance to enable states to take steps to reduce the costs of preparing and reviewing initial Part 70 permit applications. According to the White Paper, a perceived lack of clarity in these requirements led to an unintended escalation in permit application costs; sources felt compelled to make conservative assumptions to assure themselves of receiving the "application shield" and avoiding enforcement actions.

The White Paper describes the EPA’s position on Title V permitting procedures for activities involving non-major R&D and states that R&D activities are generally not included in the Part 70 application process since they are usually independent and non-major sources. However, there are some that are either individually major sources or have significant contributions to the product of a collocated major manufacturing facility and are therefore subject to Title V review. The White Paper clarifies Title V applicability for R&D activities that are located at, but not contributing significantly to the product of, a Title V major source.

On August 31, 1995, the EPA proposed a supplement to previous proposed actions related to permit revisions (60 FR 45530).<sup>2</sup> The August 31 edition clarifies Title V permitting requirements to non-major R&D facilities that are located with sources that are major and contains a definition of R&D that assisted in the development of the definition in the proposed rule 15A NCAC 02Q .0529. However, the EPA never finalized its proposed actions, including the proposed definition of R&D.

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<sup>1</sup> The full text of the 1995 EPA White Paper can be found at: <https://www.epa.gov/sites/default/files/2015-08/documents/fnlwtppr.pdf>

<sup>2</sup> References to the previous EPA proposed actions include 59 FR 44460, August 29, 1994 and 60 FR 20804, April 27, 1995.

On August 31, 2001, the EPA granted the DAQ full approval of its Title V operating permit program pursuant to the federal implementing regulations in 40 CFR Part 70 (66 FR 45941; effective October 1, 2001). Title V of the CAA and its implementing regulations in Part 70 set forth minimum requirements for State operating permit programs.

### **III. Reason for Rule Adoption**

The reason for action is to clarify Title V requirements for non-major R&D activities pursuant to S.L. 2023-134, Section 12.11.(d), which requires the EMC to begin the rulemaking process for creating a Title V permit exemption for non-major R&D activities consistent with EPA's "*White Paper for Streamlined Development of Part 70 Permit Applications*". This rule will capture the S.L.'s intent to provide flexibility for owners and operators of a major source with R&D activities. The current practice of reviewing R&D activities is performed under the existing provisions of Rule 02Q .0503(8), which closely aligns with the Division's understanding of EPA's position in the White Paper. Adding this rule is not expected to change the Division's permitting practices, or how R&D activities are treated under Title V permitting. Increased clarity will result in a better understanding of the flexibility that is given by the Division, promoting R&D activities at collocated major facilities, and streamlined processes for the regulated community.

### **IV. Proposed Rule**

With this action, the Division is proposing the adoption of one new rule, 15A NCAC 02Q .0529, *Title V Insignificant Research and Development Activities Exemption*, as outlined below:

In Paragraph (a), research and development activities are defined, specifying that the activities are to conduct research and development into new processes and products, supervised by trained personnel, and not engaged in the manufacture of products for sale or exchange for commercial profit. The proposed definition aligns closely with that proposed by EPA in August 1995.

In Paragraph (b), emissions thresholds are outlined, under which R&D activities can qualify as an insignificant activity because of size or production rate. These activities must meet the R&D definition in Paragraph (a) and the following three emissions requirements:

- 1) Emissions from the R&D activities would not violate any applicable emissions standard;
- 2) Actual emissions of particulate matter, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide from the R&D activities, before air pollution control devices, are each no more than five tons per year; and
- 3) Actual emissions of each hazardous air pollutant from the R&D activities, before air pollution control devices, are below 1,000 pounds per year.

These three requirements mimic the provisions for insignificant activities because of size or production rate under current Rule 02Q .0503(8), with the only change being the use of actual emissions instead of potential emissions in items 2 and 3.

In Paragraph (c), permit and reporting requirements are given for the owner or operator of a major facility with insignificant R&D activities pursuant to Paragraph (b). Consistent with existing Rule 02Q .0507, insignificant activities because of size or production rate must still be included in the facility's Title V permit application. For an existing facility that wishes to conduct R&D activities not already on their permit, the facility must provide notification to the Division at least 7 days prior to commencing the activity. In all cases, records demonstrating compliance with the rule need to be kept and provided to the Division upon request.

## **V. Estimating the Fiscal Impacts**

The impacts on the private sector, North Carolina State Government, and North Carolina local government will be discussed in the following subsections. The DAQ does not expect any appreciable change in permitting processes for the regulated community or the Division. Overall, there is negligible quantitative impact on the estimated costs and savings for all three of the affected entities.

### **A. Private Sector**

For major facilities with insignificant R&D activities, there will be little change, if any at all, from adoption of 15A NCAC 02Q .0529, since these activities can already be authorized as insignificant pursuant to Rule 02Q .0503(8). However, there may be perceived additional flexibility since there will now be a standalone rule that clarifies the requirements specific to R&D activities, which may allow for incremental efficiency gains for work processes. Under the proposed rule, facilities subject to Title V permit requirements will continue to have the flexibility to work with the Department of Environmental Quality to authorize R&D activities in a streamlined manner. Owners and operators will need to notify the DAQ of R&D activities 7 days in advance. This notification will likely be done via email, which will require a minimal amount of time but will help streamline the facility's ability to start the activities.

The requirements of this rule closely resemble the provisions of existing Rule 02Q .0503(8), with the only change being the use of actual emissions instead of potential emissions when applying the insignificant emissions thresholds of proposed Paragraph (b). While it is possible that there could be additional facilities with R&D activities that qualify as insignificant under proposed Rule 15A NCAC 02Q .0529 (by use of actual emissions), but which would not qualify as insignificant under existing Rule 02Q .0503(8) (when using potential emissions), the DAQ believes it is unlikely for this to be the case. Any impacts from this distinction would be minor and not quantifiable since these activities are already reviewed as insignificant under current Rule 02Q .0503(8). Based on review of readily available data, the DAQ estimates that about 5-10% of the total 307 Title V facilities in the State have insignificant R&D activities authorized on their permit.<sup>3</sup> In the researched selection, some facilities that have R&D activities did not report emissions data from these activities in recent years, indicating that their R&D activities may be intermittent and not conducted every single year. Intermittent R&D means that any potential impact would be very limited given the low number of facilities with these

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<sup>3</sup> The total number of Title V facilities in the State represented here (307) is based on a report of unique Facility ID numbers with active Title V permits, as of February 26, 2024. It does not include possible facilities with pending Title V permits.

activities. There is no appreciable quantifiable impact to regulated facilities expected as a result of this rule adoption.

**B. North Carolina State Government**

15A NCAC 02Q .0529 will provide clarity within the Division’s rules consistent with the EPA’s White Paper, which the Division currently implements under Rule 02Q .0503(8). Notification of R&D activities to the Division would have negligible impacts on the processes of the Division since this is the current practice for insignificant activities under Rule 02Q .0503(8). The time spent by the Division processing these notifications is expected to be minimal. Permitting costs, fees, costs to review emissions inventories, and inspection costs will remain the same as compared to existing practices. Therefore, there are no measurable costs or savings that affect the State.

**C. North Carolina Local Governments**

There are three local government air quality agencies in North Carolina, in the following counties: Buncombe, Forsyth and Mecklenburg. These local air programs have their own local regulations for Title V permitting within their respective jurisdictions. To the extent that any of these agencies choose to adopt this proposed rule, then their impacts would be the same as that expected for North Carolina State Government, with having no appreciable change in estimated costs and savings. If there is a major facility with R&D activities owned by a local government entity, then their impacts would be the same as those described above for the private sector, with having increased perceived flexibility but no appreciable quantitative impact of costs and savings.

**VI. Conclusion**

The DAQ is proposing one new rule for adoption, 15A NCAC 02Q .0529, to address S.L. 2023-143, Section 12.11.(d). The proposed changes continue to align the rules with existing federal requirements and current DAQ practices under 15A NCAC 02Q .0503(8) which may provide incrementally improved clarity and consistency for Title V facilities conducting non-major R&D activities.

The DAQ does not expect the rule changes to result in any health or environmental impacts or have any appreciable cost or benefit. The changes are proposed to satisfy the requirements of the recent S.L., while retaining EPA-approval of North Carolina’s Title V operating permit program. There will be no expected change in emissions as a result of this adopted rule, since insignificant R&D activities were already being reviewed in accordance with the EPA’s 1995 White Paper and under the current provisions of 15A NCAC 02Q .0503(8). Therefore, there will be no impact to public health and the environment.

**Appendix A: Session Law 2023-134, Section 12.11.(d)<sup>4</sup>**

The Environmental Management Commission shall begin rulemaking to create a Title V permit exemption for non-major research and development activities consistent with the Environmental Protection Agency’s position regarding exemption for such activities as set forth in the July 10, 1995, “White Paper for Streamlined Development of Part 70 Permit Application.” The rules shall include, at a minimum, allowance levels and minor permit modification thresholds to promote greater flexibility in research and development activities and to allow facilities subject to Title V permit requirements flexibility to work with the Department of Environmental Quality and notify them of research activities with a minor permit modification to maintain compliance. The Commission shall complete draft rulemaking activities and submit a Title V program amendment request to the Environmental Protection Agency no later than July 1, 2025.

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<sup>4</sup> The full text of Session Law 2023-134 can be found at:  
<https://www.ncleg.gov/Sessions/2023/Bills/House/PDF/H259v7.pdf>



## **Appendix B: Excerpt from EPA's 1995 White Paper**

July 10, 1995 *White Paper for Streamlined Development of Part 70 Permit Applications*<sup>5</sup>

### “9. Research and Development Activities

The EPA expects that R&D activities will generally be exempt from part 70 and not be involved in the part 70 application process since they are typically independent, non-major sources. The July 1992 part 70 preamble provided general guidance explaining that R & D activities could often be regarded as separate "sources" from any operation with which it were co located (57 FR 32264 and 32269). The Agency is clarifying and confirming their substantial flexibility under the ongoing rulemaking action to revise part 70. Some R&D activities can still be subject to part 70 because they are either individually major or a support facility making significant contributions to the product of a collocated major manufacturing facility. In addition, laboratory activities which involve environmental and quality assurance/quality control sample analysis, as well as R&D, present similar permitting problems. Such activities should be eligible for classification as an insignificant activity if there are no applicable SIP requirements. Where applicable SIP requirements do apply, they typically consist of "work practice" (e.g., good laboratory practice) requirements. In this situation, permit applications would need to contain only statements acknowledging the applicability of, and certifying compliance with, these work practice requirements. There is no need for an extensive inventory of chemicals and activities or a detailed description of emissions from the R&D or laboratory activity. Similarly, there would be no need to monitor emissions as a part 70 permit responsibility.”

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<sup>5</sup> The full text of the 1995 EPA White Paper can be found at: <https://www.epa.gov/sites/default/files/2015-08/documents/fnlwtppr.pdf>

1 15A NCAC 02Q .0529 is proposed for adoption as follows:

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3 **15A NCAC 02Q .0529 TITLE V INSIGNIFICANT RESEARCH AND DEVELOPMENT ACTIVITIES**  
4 **EXEMPTION**

5 (a) For the purposes of this Rule, “research and development activities” or “R&D activities” means the following:

6 (1) activities conducted to test more efficient production processes or methods for preventing or  
7 reducing adverse environmental impacts, provided that the activities do not include the production  
8 of an intermediate or final product for sale or exchange for commercial profit; and

9 (2) activities conducted at a research or laboratory facility that is operated under the close supervision  
10 of technically trained personnel the primary purpose of which is to conduct research and  
11 development into new processes and products and that is not engaged in the manufacture of products  
12 for sale or exchange for commercial profit, except in a de minimis manner.

13 (b) Notwithstanding the definition of "insignificant activities because of size or production rate" in 15A NCAC 02Q  
14 .0503(8), R&D activities that meet the definition in Paragraph (a) of this Rule and are located at a major facility shall  
15 qualify as an insignificant activity because of size or production rate if the R&D activities meet the requirements of  
16 this Paragraph:

17 (1) Emissions from the R&D activities would not violate any applicable emissions standard;

18 (2) Actual emissions of particulate matter, sulfur dioxide, nitrogen oxides, volatile organic compounds,  
19 and carbon monoxide from the R&D activities, before air pollution control devices, are each no  
20 more than five tons per year; and

21 (3) Actual emissions of each hazardous air pollutant from the R&D activities, before air pollution  
22 control devices, are below 1000 pounds per year.

23 (c) Pursuant to 15A NCAC 02Q .0507(b), the owner or operator of a new major facility shall include in the Title V  
24 permit application R&D activities that qualify as an insignificant activity because of size or production rate pursuant  
25 to paragraph (b) of this Rule. For an existing major facility with new R&D activities that qualify as an insignificant  
26 activity pursuant to Paragraph (b) of this Rule, the owner or operator shall provide notification of the R&D activities  
27 to the Division no less than seven days prior to commencing the R&D activity. The owner or operator of insignificant  
28 R&D activities pursuant to Paragraph (b) of this Rule, shall also keep records demonstrating compliance with this  
29 Rule and provide those records to the Division upon request.

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31 History Note: Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(10); 143-215.108;  
32 Eff.