

## TITLE V

### Research and Development (R&D) Facility Applicability Under Title V Permitting

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The purpose of this notification is to explain the current U.S. EPA policy to establish the Title V permit exemption for non-major Research and Development (R&D) operations. This policy is explained in detail in the preamble to the August 31, 1995 proposed changes to the federal Title V permitting rules (attached).

In Ohio, we will employ **immediately** U.S. EPA interpretation of this exemption as discussed in the August 31, 1995-preamble. You will not be expected to handle non-major R&D facilities as described in the STARShip User Manual that was based on a compromise worked out with U.S. EPA under their former interpretation of this exemption. The August 31, 1995-preamble rule proposal and the July 10, 1995 "White Paper for Streamlined Development of Part 70 Permit Applications" clearly provides a change in position by the U.S. EPA.

It may be necessary for you to obtain a new 10-digit facility identification number if you have an R&D facility that in accordance with the **attached guidance** deserves to be separated from the production facility. If this is the case, please work with the appropriate **district office or local air agency** staff to obtain the new facility identification number.

Should you have any questions regarding this policy, please feel free to contact someone from our Title V technical assistance team at (614) 644-2270 or email at [t5support@central.epa.ohio.gov](mailto:t5support@central.epa.ohio.gov).

Ohio EPA  
Division of Air Pollution Control  
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### Excerpt from the July 19, 1995 "White Paper for Streamlined Development of Part 70 Permit Applications" that was issued by U.S. EPA.

#### 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.

Excerpt from the preamble of the 40 CFR Part 70 rule proposal published on August 31, 1995 in the Federal Register (in part pages 45556 through 45558) dealing with the rationale for the exemption for Title V Non-major R&D Activities.

## **V. Other Changes and Clarifications**

### **A. Rationale for Proposed Exemption for Non-major R&D Activities**

The Agency is today clarifying the reasoning behind its July 21, 1992 preamble discussion regarding R&D activities, and is proposing changes to the definition of "major source" in part 70 that better reflect this intent. As explained below, States have flexibility under part 70 regarding whether to consider R&D operations as part of the source with which it is sited for purposes of determining whether a major source is present.

The part 70 major source definition requires aggregation of "all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control)." Following NSR/PSD precedent, EPA chose the major (2-digit) Standard Industrial Classification (SIC) code categories established by the U.S. Department of Commerce to delineate an "industrial grouping."

In response to comments requesting exemption of R&D activities from title V, EPA stated in the preamble to the final part 70 rule that, "in many cases States will have the flexibility to treat an R&D facility . . . as though it were a separate source, and [the R&D facility] would then be required to have a title V permit only if the R&D facility itself would be a major source" (57 FR 32264 and 32269, July 21, 1992). Read consistently with the "major source" definition in the rule, however, this statement could be read as meaning that separate source treatment would occur only in situations where the R&D portion of a source has its own two-digit SIC code and is not a support facility.

In light of the uncertain meaning of the July 21, 1992 preamble statement, industry representatives have continued to express concerns over the permitting of R&D operations. The EPA recognizes that R&D operations typically entail the use of small quantities of chemicals manipulated and released in a highly variable manner, and that these attributes are present at R&D operations to a degree that distinguishes them from other source categories. The EPA further recognizes that, because of these unique combinations of attributes, bringing collocated non-major R&D facilities into part 70 permitting could potentially lead to difficult exercises in emissions estimating and tracking and impose additional monitoring and recordkeeping requirements (where the R&D operation is subject to an Act requirement).

In response to these continuing concerns, EPA is today offering a more detailed explanation of the SIC code approach as it affects R&D operations. In addition, EPA is proposing revisions to the part 70 major source definition to resolve any ambiguities that may derive from the SIC code manual, and to ensure that the same result obtains for purposes of section 112 if the changes to the major source definition proposed on August 29, 1994 are carried to finality. The EPA recognizes that parallel rule revisions would be required for part 63 (the section 112 General Provisions) and parts 51 and 52 (NSR and PSD). These other rules would be revised through a separate rulemaking action.

At the time of the July 1992 promulgation, EPA believed that R&D was not specifically addressed by the SIC code manual in any way. It would have followed that the question of whether and how R&D should be

considered part of a source would be answered in light of the rules traditionally applied to determine the extent to which activities at a site are functionally integrated.

In general, to be considered a functional part of an industrial activity, a facility must contribute to that activity in a material, rather than merely conceptual, manner. The EPA believes that operations as proposed for definition in 70.2 do not contribute to the product or service rendered at an industrial site in any relevant sense. By definition, the product of an R&D operation is information potentially useful to create a new industrial process or to improve the process ongoing at the facility, but not to directly support the process in which the industrial activity is currently engaged or capable of engaging in any significant commercial fashion. It follows that R&D would not be considered part of the industrial activity with which it is located, despite its location, and must therefore be treated as if it were a separate source belonging to a separate 2-digit SIC code.

Under the Agency's support facility test, even where neighboring, commonly controlled sources have different 2-digit SIC codes, they should be aggregated to determine whether a major source is present if the output of one is more than 50 per cent devoted to support of another. However, EPA believes that R&D operations should not generally be considered support facilities, since the "support" provided is directed towards development of new processes or products and not to current production.

The limits of this interpretation should be self-evident. To the extent an activity bears some resemblance to R&D but in fact contributes to the ongoing product produced or service rendered at a facility in a more than de minimis manner, those activities should be considered part of the source. Pilot plants often present instances of activities that are conducted on a trial basis, but which are nevertheless dedicated to producing a product for commerce to a more than de minimis extent, and so would not be considered R&D. The EPA has spoken directly to the types of processes that qualify as R&D in the context of certain section 112 MACT standards. These descriptive statements address the question of whether R&D should be included in particular MACT source categories, rather than major source applicability, and so are not relevant to the principles discussed in this notice.

Since the July 1992 promulgation, EPA has learned that the SIC code manual itself presents an obstacle to this interpretation, because it provides that R&D should generally be grouped with the four-digit code activity with which it is most closely associated. Because this contrasts with EPA's understanding at the time of promulgation of part 70, EPA believes it appropriate to continue to implement the current rule to allow for separate consideration of R&D as described above. At the same time, EPA is today proposing to revise the major source definition to clarify that R&D should be treated as having its own industrial grouping for purposes of the title I and section 302(j) elements of the major source definition.

A parallel rule revision is also being proposed for the section 112 element. This is because the August 1994 proposal would change the part 70 definition to conform to the section 112 General Provisions, which do not use the SIC code approach to source aggregation. Today's notice proposes to establish a narrow exception for R&D facilities. Because the major source definitions used under title V must be consistent with other Act programs, EPA plans to follow this revision to part 70 with conforming revisions to the major source definition in the section 112 General Provisions and other section 112 rules. In addition, a new definition for "research and development activities" is proposed for 70.2.

The EPA's authority for this part 70 revision is the same as that which supported its adoption of the 2-digit SIC code limitation in parts C and D of title I and thus in title V. As EPA stated in its 1980 promulgation of PSD regulations, the 2-digit SIC code grouping embodies a common sense notion of a "plant" that is appropriate for the PSD program (45 FR 52694 (August 7, 1980)). For title I and section 302(j) purposes, the establishment of a separate industrial grouping for R&D simply represents a further refinement to that common sense approach.

The EPA chose not to adopt the SIC code approach in the section 112 context because it concluded that a definition that encompassed the entire contiguous commonly owned facility would be more consistent

with the overall intent of section 112. However, the statutory language of section 112(a)(1), which refers to "any stationary source or group of stationary sources" (emphasis added), leaves EPA discretion to separate out discrete groups of stationary sources that are located together only for administrative convenience, rather than because they contribute to other activities at the site. That this same language appears in the various nonattainment "major source" definitions added by the 1990 Act Amendments, where EPA's historical practice has been to allow disaggregation by major industrial grouping, further supports this interpretation. The EPA now believes that a disaggregation of R&D operations makes sense in the context of section 112, as well as title I and thus in title V, because (1) they are operations which by definition could stand alone, but which are located with other sources primarily for administrative convenience, and (2) the inherent changeability of these operations.

The reasonableness of this separate treatment is further supported by section 112(c)(7), which states that, for section 112 purposes, "the Administrator shall establish a separate category covering research or laboratory facilities, as necessary to assure the equitable treatment of such facilities." Although this provision addresses source categorization for promulgation of standards rather than applicability, it clearly evidences a concern that R&D operations not be grouped with other types of operations in a way that overlooks the particular challenges associated with their regulation.

The EPA wishes to emphasize that R&D operations present a unique case under section 112. As noted above, EPA, after studying the matter, has concluded that R&D is unique in terms of the variability and unpredictability of processes. Also, as previously discussed, R&D operations are inherently divorced from the primary activity at a facility. While other types of activities may or may not support the primary activity depending upon the configuration at a particular site, R&D activities categorically do not (except, as the definition would provide, in a de minimis manner).

Today's notice does not define the term "de minimis" as used in the definition of R&D. The EPA solicits comment on whether it should attempt to further define de minimis in the final rule, and if so, what criteria would be appropriate. For instance, de minimis might be defined in absolute terms, in terms of the amount of the R&D product that is offered to the industrial activity relative to the total product from the R&D operation, or in terms of the amount of support from the R&D operation relative to the magnitude of that activity.

The EPA also solicits comment on whether the special treatment afforded by this proposal should be extended to laboratory activities that are not R&D. The proposal would exclude such laboratory activities. The reasoning is that other laboratory activities fall outside of the rationale supporting special treatment, since they are likely to be more predictable in their operations and to be functionally integrated with on-site industrial activities. The Agency solicits comment on whether there are other categories of laboratory activities for which this is typically not the case.

As noted above, several States interpreted the July 1992 preamble discussion of R&D activities as authorizing the creation of a separate applicability category for R&D, apart from the 2-digit SIC code approach. Most of these provisions have been identified as grounds for interim approval. The EPA notes that while these programs aim for a similar result, they are not uniform in their specifics. For instance, definitions of R&D may differ from EPA's definition or may be absent altogether. For this reason, EPA is not today commenting on whether the clarification in today's notice merits a change in the approval status of any of these programs, but instead plans to address this on a case-by-case basis.

Notwithstanding the preceding approach which provides for separate treatment of the majority of R&D activities, two issues remain related to when such R&D activities would independently be considered to be major under part 70. Specifically, one issue concerns the effect of a facility that supports the R&D activity on the status of the R&D activity and the other issue concerns how the PTE for R&D activities is to be determined.

Industry has expressed concern about a stand-alone R&D activity (i.e., not located with a manufacturing facility) which is supported by another activity (e.g., a boiler) which on its own may exceed major source thresholds. This issue is not addressed by placing the R&D activity in a separate SIC category, which would only cause the R&D activity to be treated separately. The boiler would be considered part of the stand-alone R&D activity if it was functionally integrated with the R&D activity. The R&D activity together with the boiler would then be considered major. Industry has recommended that boilers and other support facilities not be considered part of an R&D activity.

The EPA recognizes that disparate treatment may result if an R&D activity at a major manufacturing facility would be considered separate and non-major, while another R&D activity of the same size standing alone would be considered a major source only because of its support facilities. The Agency, therefore, believes an R&D activity should be considered separate from major support facilities just as it would be separate from a major manufacturing source, and solicits comment on whether it should provide an exemption from major source determination rules in the case of facilities that support R&D activities. The EPA, however, recognizes the potential for this approach to apply in many other circumstances with a possible erosion of the concept of a source as the sum of functionally integrated parts, a result the Agency does not support. The Agency therefore suggests commenters provide rationale as to how the approach can be limited to R&D activities.

As noted, a source must calculate PTE from an R&D operation to determine whether it is major. In light of the previously mentioned difficulty of performing emission calculations, and the data gathered by EPA to date (discussed in footnote 6 above), which indicates that even large R&D facilities tend to have very low actual emissions, EPA considers it of little benefit to require R&D facilities to go through extensive efforts in calculating PTE. Permitting authorities will bear primary responsibility for determining the PTE of individual R&D facilities, and EPA intends to generally defer to these judgments. Given the small likelihood that any R&D operation will be major, EPA believes permitting authorities should accept methods of calculating PTE from R&D operations that are not unduly burdensome on the source.

Some have claimed that deriving a numerical PTE calculation from an R&D activity is simply not possible, because experiments are typically performed only once or a few times, meaning that past emissions are at best a poor indicator of the future. The EPA is unsure whether this renders PTE calculations strictly impossible, but acknowledges a high degree of difficulty. The EPA believes R&D may present a case suitable for a de minimis exception from the statutory requirement to calculate PTE, because emissions are so low as to yield a gain of trivial or no value compared to the difficulty associated with their measurement. Comment is solicited on whether such an exception would be appropriate, and more generally on the availability of cost-effective means of calculating PTE from R&D activities.

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