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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR, NOISE, AND RADIATION

Mr. Stephen A. Goldberg
Mr. Patrick M. Rahe
Hogan & Hartson
815 Connecticut Avenue
Washington, D.C. 20006

Dear Sirs:

This is in reply to your letter of July 23, 1981, in which you posed several questions regarding the applicability of PSD and/or NSPS to certain changes proposed for a petroleum storage facility. Your letter presented an outline of various physical and product storage changes which will result in changes in emission levels, and then asked several questions based on that scenario. I would like to preface our responses to your questions by stating that they will be based on the facts stated in your letter and the following assumptions: first, that no physical changes are being made to the storage tanks themselves, other than the addition of mixers, and second, that the tanks were capable of accommodating the new product prior to June 11, 1973. I would like to address your questions in the order in which they were raised.

A. General

Under PSD, the measure of the emission change would be the difference between the actual emissions at the time of the proposed change and the emissions occurring as a result of the proposed product change. Actual emissions are defined in general, as the average emission rate of a source during a two year period before the proposed modification (See 40 CFR 52.21(b)(21)).

Measuring the emission rate for NSPS purposes varies from PSD only to the extent that the actual emission rate of a source is determined at the time of the proposed change rather than determined by averaging emissions from the previous two years. Also the emission rate, for NSPS purposes, is determined on a kg/hr basis rather than on a tons/year basis.

B. PSD

1. Under the PSD regulations, a source is considered as all the pollutant emitting activities, under common control or ownership, at contiguous or adjacent sites, and under the same major SIC industrial grouping. In the situation outlined in your letter, the source would be considered an oil refinery and the storage tanks would be considered as emission units within the refinery. Based on the previous mentioned assumptions, the product storage change, itself, is not considered a physical change or change in the method of operation (See 40 CFR 52.21(b)(2)). If, then, the new piping, pumps, and mixers are not built, the product storage change would not be subject to PSD review.

The addition of the piping, pumps, and mixers is considered a physical change. PSD applicability would be based on a significant increase in emissions resulting from these changes and any other creditable contemporaneous emission increases or decreases (See 40 CFR 52.21(b)(3)).

If the emission increases resulting from the addition of the piping, mixers, or pumps (or any combination of these items) are greater than de minimus and there are not sufficient creditable decreases to offset these emissions, the changes would be subject to PSD review. The emission increase from the product storage change would be considered a contemporaneous increase, and included in the air quality analysis. The increase in emissions at the tanks, however, would be exempt from the BACT requirements (See 40 CFR 52.21(j) (3)).

2. (a) The multiple tank storage change in your example would be considered a single project under PSD. The emission change would be the net total of non-exempt changes, and if this number is greater than de minimus, any other creditable contemporaneous emission increases or decreases. Thus, if none of the four product storage changes were exempt the emission increase would be 75 tons/year.

(b) If the changes at Tanks 3 and 4 are exempt, the emission change for PSD purposes could still be 75 TPY. However, the increases at Tanks 3 and 4 would be a contemporaneous emissions increase and would only be used for applicability purposes, if the increases at Tanks 1 and 2 are greater than de minimus. Since the changes at Tanks 1 and 2 would result in a net increase of only 20 tons per year, less than de minimus, the project would be exempt from PSD review.

(c) The emission increase associated with the non-exempt physical changes must be greater than de minimus before the contemporaneous time period is triggered. Using the emission figures in your example, the contemporaneous time period would be triggered if none of the proposed changes are exempt and would not be triggered if the changes at Tanks 3 and 4 are exempt.

C. NSPS

The product storage changes associated with installation of piping and/or pumps alone (Tanks 1 and 2 in the sample situation) would be exempt from NSPS under 40 C.F.R. Section 60.14(e). Section 60.14(e)(4) provides that the use of an alternative fuel or raw material will not by itself be considered a modification if the existing facility was designed to accommodate that use. Under 40 C.F.R. 60.2, the existing facility is defined as "any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard. . . ." Under Subpart Ka of 40 C.F.R. Part 60, the "affected facility" (the facility for which the petroleum storage standards were promulgated) does not include piping and pumps external to the storage tank. As a result, even though an emissions increase would result from the product storage changes for which installation of piping and pumps is necessary, under 60.14(e) (4) the increase would not subject the tanks to the NSPS, because the existing facility itself was capable of accommodating the new materials.

Section 60.14(e) would not exempt the product storage changes associated with installation of a mixer (Tanks 3 and 4). Since the mixer would be considered part of the affected facility under Subpart Ka, and since these tanks apparently cannot accommodate the new non-homogeneous materials without a mixer, installation of a mixer and a subsequent product storage change resulting in increased emissions would constitute a modification of these storage tanks and subject them to the NSPS.

Based upon this discussion, the answers to your specific questions are as follows:

1. (a) The product storage changes are exempt from NSPS review if the piping, pumps, and mixers are not built.

(b) The product storage changes are exempt if only the new piping and pumps are built.

(c) The product storage changes at tanks where mixers are built would subject those tanks (Tanks 3 and 4) to the NSPS.

(d) If the piping, pumps, and mixers are all built, the product

storage changes at tanks where mixers are built (Tanks 3 and 4 only) would subject only those tanks, to the NSPS. Again, Tanks 1 and 2 would be exempt.

2. Each of the storage tanks is considered a separate facility and the applicability of NSPS is examined separately for each tank. If one were to assume that none of the tanks in the sample situation were exempt under Section 60.14(e)(4), Tank 2 would not be subject to NSPS review because there is no increase in emissions at that tank. The interconnecting of the storage tanks by a pipe network would not affect this situation.

3. There is no de minimus increase threshold below which the NSPS would not apply to a non-exempt storage change. Normally, an increase in the emission rate would be clearly demonstrated by manual emission tests or continuous monitoring as specified in 40 CFR 60, Appendix C. However, in the case of storage tanks, emission factors must be used to approximate the increase in emissions. Emission factors do not provide the necessary precision for measuring storage emissions to enable the Agency to discern whether there was an increase of one ton per year. As discussed earlier, increases are determined on a kg/hr basis, so that a one ton/year increase would result in an emissions difference which could not practically be approximated on an hourly basis.

One further point should be made to clarify the impact of NSPS review on your example. The piping and pump installations may be subject to the NSPS for Petroleum Refinery Fugitives depending upon the construction date and the regulation's effective date. This equipment is specifically listed as an affected facility in drafts for this future NSPS.

If you have further questions concerning this PSD and NSPS applicability determination, please contact Janet Farella or Ann Eastham of my staff at 755-2564.

Sincerely yours,

Edward E. Reich, Director
Division of Stationary
Source Enforcement (EN-341)

cc: Peter Wyckoff - OGC
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WRITER'S DIRECT DIAL NUMBER
(202) 331-4682

July 23, 1981

Mr. Edward Reich
Director
Division of Stationary Source Enforcement
U.S. Environmental Protection Agency
401 M Street, S.W.
Mail Code: EN341
Room 3202-M
Washington, D.C. 20460

Re: Request for PSD and NSPS
Applicability Determinations

Dear Mr. Reich:

This request for PSD and NSPS applicability determinations is being made on behalf of the owner of several petroleum refineries located in several different Regions. The owner anticipates common, recurring NSPS and PSD questions concerning the petroleum storage tanks at these refineries, and this request is therefore directed to your office for a single response,
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rather than to each of the Regions. The relevant facts and specific determinations requested are set forth below:

I. FACTS

Due to various causes (e.g., tank retirement, new production schedules, etc.), it is desirable from time to time to change the product storage pattern at a refinery's petroleum storage tanks. In all cases, the affected tanks are and always have been physically capable of storing the products they would store after a pattern change. (See FOOTNOTE*)

All of the tanks which might be affected were constructed prior to June 11, 1973, and none has ever been the subject of a modification within the meaning of the PSD and NSPS regulations. The capacity of each tank exceeds 40,000 gallons.

The potentially-affected tanks are presently loaded and unloaded by pipeline. Generally speaking, storage changes could not be accomplished using existing pipelines, but could be accomplished by other means, such as by truck, and the various sites are and always have been physically capable of loading and unloading by truck. However, as a matter of convenience and practicality, it would be desirable to build new piping for these purposes. Any new piping would be external to the tanks and would consist essentially of changing the tank "feed" and "exit" lines to connect with different existing main product lines. Several new pumps, also external to the tanks, would be required in conjunction with the pipeline changes.

In some instances, storage pattern changes would result in the use for blending purposes of tanks not previously used for such purposes. Mixing devices, internal to the tanks, would be added to these tanks to facilitate the blending process. The mixers would not affect the storage capabilities of the tanks.

[FOOTNOTE *] The refineries also are and always have been physically capable of accepting any products which are or might be stored.

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The piping, pump, and mixer changes would not themselves result in any emissions increases or decreases. The only emissions changes would be those associated with the new product storage patterns. At any given tank the new storage patterns might result in no change in emissions, an increase in emissions, or a decrease in emissions. Neither the physical changes (piping, pumps, and mixers), nor the storage changes are proscribed by any applicable permits.

A sample situation is attached hereto. The four storage changes in the example are interdependent and constitute a single, integrated project. It is requested that the specific questions posed in Sections II.B. and II.C. below be answered for the sample situation. (The emission changes in the example should be assumed to represent the correct computation as per your

response to the questions posed in Section II.A.)

II. QUESTIONS

A. General

1. Is the proper measure of the emissions change associated with a given tank the difference between its emissions with the actual product stored during the two years preceding the change and (a) its emissions with the proposed product, or (b) its emissions with the "worst case" product that could be stored? Why?

2. Does the answer to the preceding question differ for PSD and NSPS purposes?

B. PSD

I. Are the product storage changes in the example exempt from PSD review under 40 C.F.R. Section 52.21(b) (2) (e):[see footnote *]

(a) if the new piping, pumps, and mixers are not built?

[footnote *] If the answers differ among the tanks, please indicate the answer for each tank.

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(b) if only the new piping and pumps are built?

(c) if only the mixers are built?

(d) if the piping, pumps, and mixers are all built?

2. Is the multiple tank storage change in the example a single project from a PSD perspective, such that if it constitutes a modification, it is a single modification and the emissions change associated with the project is the net total of the nonexempt storage changes? Thus,

(a) if none of the four product storage changes were exempt from PSD review, would the emissions increase associated with the project be 75 tons per year?

(b) if for some reason the changes at tanks 3 and 4 were exempt under 40 C.F.R. Section 52.21(b) (2) (e), but the changes at 1 and 2 were not, would the emissions change for PSD purposes be a 20 ton per year increase?

(c) is the net total of the non-exempt storage changes the proper figure to use in determining whether a computation of the contemporaneous, creditable increases and decreases for the past five years is necessary under PSD Ruling 120? For example, would the five-year computation be required under subpart (a) of this question, but not under subpart (b)?

B. NSPS

1. Are the product storage changes exempt from NSPS review under 40 C.F.R. Section 60.14(e):[see footnote *]

(a) if the new piping, pumps, and mixers are not built?

[footnote *] If the answers differ among the tanks, please indicate the

answer for each tank.

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- (b) if only the new piping and pumps are built?
- (c) if only the mixers are built?
- (d) if the piping, pumps, and mixers are all built?

2. Are each of the storage tanks a separate facility, such that the applicability of NSPS should be examined separately for each? Thus, assuming none of the tanks in the example were exempt under 40 C.F.R. Section 60.14(e), would NSPS apply to tanks 1, 3, and 4, but not to 2? Does the existence of an interconnecting pipe network affect this result?

3. Is there any de minimis increase threshold (e.g., 1 tpy) below which NSPS would not apply to a non-exempt storage change?

III. CONCLUSION

If further information is necessary to process these requests, kindly contact either of the undersigned, at (202) 331-4682, or (202) 331-5783, respectively.

Sincerely,

Patrick M. Raher

Stephen A. Goldberg

Attachment

| | | | EXAMPLE ----- |
|-------------------|--|------------------------------------|--|
| TANK NO. ----- | PHYSICAL CHANGE (See Footnote *) ----- | PRODUCT STORAGE CHANGE ----- | VOC EMISSIONS CHANGE (See Footnote *) ----- |
| 1 | piping only | Yes | +50 tpy |
| 2 | piping and pump | Yes | -30 tpy |
| 3 | piping and mixer | Yes | +10 tpy |
| 4 | mixer only | Yes | +45 tpy |
| | | | ===== |
| NET = | | | +75 tpy |

Footnote *: No associated emissions change.

Footnote **: Results solely from product storage change.