



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION 10**  
1200 Sixth Avenue  
Seattle, Washington 98101

Reply To  
Attn Of: OAQ-107

Paul Mairose  
Southwest Air Pollution Control Authority  
1308 NE 134<sup>th</sup> Street  
Vancouver, WA 98685-2747

Re: NSPS Subpart DD Applicability Determination Request

Dear Mr. Mairose:

This letter is in response to your February 14, 2000, request to Doug Hardesty for a determination of the applicability of the Standards of Performance for Grain Elevators to the grain handling and storage facilities operated by Kalama Export Co. in Kalama, Washington. Based on the information available and for the reasons stated below, the facilities do not meet the definition of "grain terminal elevator" found at 40 C.F.R. § 60.301(c) and are therefore not subject to the Standards of Performance for Grain Elevators found in 40 C.F.R. Part 60 Subpart DD. Additionally, since the facility operated by Kalama Export Co. does not meet the definition of a *grain terminal elevator* found in 40 C.F.R. § 60.301, the fugitive emissions are not included in determining applicability for the Prevention of Significant Deterioration (PSD) and Title 5 permitting programs.

### **Background**

Below is a summary of the information contained in the materials you provided in support of the applicability determination request. Kalama Export operates grain handling and storage facilities in Kalama, Washington. The facilities include rail car unloading stations, grain handling equipment, grain storage bins and silos and ship and barge loading stations. The facilities process and store a variety of grains including corn, wheat, and soybeans. The facility commenced construction in the early 1980s and began operating in 1983.

### **Regulations**

The Standards of Performance for Grain Terminals are found in 40 C.F.R. Part 60 Subpart DD. As you point out in your request, these regulations were originally proposed in February 1977 to regulate emissions from grain elevators and terminals having a throughput capacity of 10,000 bushels per hour. However, the 1977 Clean Air Act Amendments specifically directed the EPA that, "any regulations applicable to grain elevators shall not apply to country elevators....which have a storage capacity of less than two million five hundred thousand bushels" (Section 111(i) of the Clean Air Act). As a result, the final regulation was promulgated with the applicability of

Subpart DD being dependent upon the storage capacity, not the throughput as originally proposed. This was accomplished in the final rule by defining *grain terminal elevator* as follows:

“A grain terminal elevator means any grain elevator which has a permanent storage capacity of more than 88,100 cubic meters (ca. 2.5 million U.S. bushels)” (40 C.F.R. § 60.301(c)).

The regulations of Subpart DD apply to each affected facility an any grain terminal elevator which commenced construction, modification or reconstruction after August 3, 1978 (40 C.F.R. § 60.300). The list of affected facilities include each railcar unloading station and each barge and ship loading station (40 C.F.R. § 60.300(a)).

## Questions

In your request for determination of applicability, you posed three sets of questions related to these facilities. The first set of questions deals with the determination of permanent storage capacity for the facilities and questions the Kalama’s claim that certain pieces of equipment are only for “temporary” storage capacity. The second set of questions relates to the determination of permanent storage capacity as well, but questions the application of the “pack factor”, as determined by the U.S. Department of Agriculture, in determining the total capacity. Your third question relates to the applicability of the provisions in the Title 5 and Prevention of Significant Deterioration programs which direct the permitting authority to include fugitive emissions in determining applicability of those permitting programs. I will answer each set of questions in the order posed.

### 1. What is the “permanent storage capacity” of the facility?

Permanent storage capacity means grain storage capacity which is inside a building, bin, or silo. (40 C.F.R. § 60.301(d)). In applying for a Title 5 air operating permit, the company calculated storage capacity in two categories, permanent and temporary. In doing so, the company included several bins and silos in the latter category apparently because of the way those structures are used grain prior to and/or subsequent to screening, weighing and shipping. The structures consist of six silos with capacities ranging from approximately 25,000 bushels to 62,000 bushels and six bins with capacities around 1,500 bushels each. Based on the definition in Subpart DD, the permanent storage capacity must include these silos and bins which are used to store grain regardless of the designation by the facility. Therefore, the six bins and six silos designated as “temporary” by the facility should be included in determining the “permanent storage capacity” as defined in Subpart DD.

### 2. Should the permanent storage capacity take into consideration the “pack factor”, as determined by the U.S. Department of Agriculture?

The U.S. Department of Agriculture (USDA) requires licensing of certain grain handling facilities. As part of that licensing process, USDA authorizes the facility to operate as a grain terminal and certifies that maximum storage capacity of the facility. Staff at the USDA have explained that the true capability of a bin, silo, or building to store grain is affected by the “pack factor”. USDA staff explained that due to the compaction and settling of grain, along with other factors, the

storage capacity is determined by measuring the inside dimensions of the bin, silo, or building (e.g. length X width X height) and adjusting this upwards by a “pack factor”. The USDA staff indicated that the USDA has utilized the pack factor to determine storage capacity since early in the 20<sup>th</sup> century with the implementation of the United States Warehouse Act.

When USDA inspectors evaluated the storage capacity for Kalama Export Company’s facility in 1987, the inspectors calculated that the interior dimensions of the bins and silos totaled 2,343,201 bushels (82574 cubic meters). The USDA inspector also applied a “pack factor” to each bin, silo, or building that ranged from 5.8% to 9.5%. After applying this pack factor to each structure, the USDA inspector certified that Kalama Export Co. could store 2,556,718 bushels, which it rounded up to the nearest 1000 bushels for licensing purposes to 2,557,000 bushels (see bin chart WA-310).

EPA’s background documents and the preamble for the proposed and final regulation for Subpart DD make no reference to the use or exclusion of the use of the pack factor for determining applicability. Since the promulgation of Subpart DD, EPA has not made a practice of applying pack factors to determine the permanent storage capacity of grain elevators. Accordingly, the assessment of the facility’s permanent storage capacity to determine Subpart DD applicability is to be made without application of USDA pack factors. As this method of calculation yields a total of 2,343,201 bushels of permanent storage capacity at the Kalama site, the permanent storage capacity at the facility falls below the 2.5 million bushel threshold, and the Kalama facility is not a *grain terminal elevator* as defined in Subpart DD.

*3. If the facility is determined to be subject to Subpart DD, should the facility be subject to Title 5 and PSD requirements if the total emissions including fugitive emissions exceed the regulatory thresholds?*

As you point out in your request, the requirements to obtain permits under the Title 5 Air Operating Permit program and under the Prevention of Significant Deterioration (PSD) program are triggered when the potential to emit of a facility exceeds the regulatory threshold and is determined to be a “major source”. In this case, a facility with over 100 tons per year of emissions of a regulated pollutant is a major source for Title 5, while a facility with over 250 tons/yr is a major source for PSD. Both Title 5 and PSD rely on the similar language for determining if fugitive emissions are included in determining a facility’s potential to emit, and thereby to determine applicability.

For the Title 5 program, 40 C.F.R. § 70.2 states:

*Major source* means any stationary source....

(2) A major stationary source of air pollutants, as defined in section 302 of the Act, that directly emits or has the potential to emit, 100 tpy or more of any air pollutant (including any major source of fugitive emissions of any such pollutant, as determined by rule by the Administrator). The fugitive emission of a stationary source shall not be considered in determining whether it is a major stationary source for the purposes of section 302(j) of the Act, unless the source belongs to one of the following categories of stationary source:

(xxvii) All other stationary source categories regulated by a standard promulgated under section 111 or 112 of the Act, but only for those air pollutants that have been regulated for that category.

For the PSD program in Washington State, 40 C.F.R. § 52.21(b)(1)(iii)(aa) states:

The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the following categories of stationary sources:

(aa) any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the act.

It is important to note that it is the source "category" which defines the reach of the rules, not whether an individual source, having constructed or modified, must comply with the NSPS standard itself. In other words, grain elevators of the size and type covered by 40 C.F.R. Subpart DD must include their fugitive emissions to determine if they are a major source under Title 5 even if the NSPS in 40 C.F.R. Part 60 Subpart DD does not apply to that particular source (e.g., even if the source commenced construction prior to August 3, 1978). Since the facility operated by Kalama Export Co. does not meet the definition of a *grain terminal elevator* found in 40 C.F.R. § 60.301, the facility's fugitive emissions should not be included in determining the applicability of the PSD and Title 5 permitting programs.

This response has been coordinated with the EPA's Office of Enforcement and Compliance Assurance and the Office for Air Quality, Planning and Standards. If you have any questions regarding this determination, please call John Keenan of my staff at (206) 553-1817.

Sincerely,

Betty Wiese, Manager  
Air Enforcement and Program Support Unit

cc: Rich Hibbard, WDOE

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