December 22, 2014

VIA ELECTRONIC FILING

Hon. Gina McCarthy, Administrator
U.S. Environmental Protection Agency
c/o E-Docket ID No. EPA-HQ-OAR-2010-0706
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Comments of the NSPS Subpart DD Coalition on EPA's Proposal of New Source Performance Standards for Grain Elevators, 79 Fed. Reg. 39242 (July 9, 2014)

Dear Ms. McCarthy:

A coalition of six major national trade associations in the agricultural sector, *i.e.*, the NSPS Subpart DD Coalition,[1] hereby comments on the Environmental Protection Agency's (EPA) rulemaking proposal in 79 Fed. Reg. 1430 (July 9, 2014) of New Source Performance Standards (NSPSs) for emissions of particulate matter (PM) from new, modified or reconstructed "affected facilities" at certain, relatively large grain elevators. Members of each of those trade associations own or operate grain elevators in the U.S. and, therefore, would or could be directly and materially affected by EPA's final decisions in the rulemaking.

As detailed below, the Coalition respectfully challenges EPA's authority to apply any NSPS to grain elevators on a going-forward basis, on the ground that EPA has failed to show that emissions of PM from new, newly modified or newly reconstructed grain elevators present a

[1] The Coalition includes Corn Refiners Association, National Council of Farmer Cooperatives, National Grain and Feed Association, National Oilseed Processors Association, North American Millers' Association, and USA Rice Federation.

significant risk to human health and welfare within the meaning of section 111(b)(1) of the Clean Air Act (CAA), 42 U.S.C. § 7411(b)(1). However, even assuming *arguendo* that EPA does have the necessary authority, the Coalition, , respectfully disagrees with several elements of the proposed rule, herein.

To reiterate, the Coalition's overarching conclusion, however, is that the rulemaking record, as complied so far, is insufficient to support (i) the major components of proposed Subpart DDa, the version of the grain elevator NSPS that EPA proposes would operate prospectively, and (ii) EPA's Information Collection Request (ICR) to OMB. The Coalition respectfully requests that EPA (i) withdraw the present proposal, with the effect of removing July 9, 2014, as the dividing line between "new" and "existing" grain elevator facilities, and (ii) repropose, if at all, only after it has established an adequate record. Similarly, the Coalition requests that EPA withdraw its ICR for proposed Subpart DDa.

This letter first provides background information, including descriptions of the relevant provisions of the CAA, 42 U.S.C. §§ 7401 *et seq.*; the Paperwork Reduction Act (PRA), 44 U.S.C. §§ 3501 *et seq.*; and Executive Order (E.O.) 13563, 76 Fed. Reg. 3821 (Jan. 21, 2011). It then addresses EPA's authority, EPA's analysis of the regulatory impacts of the proposed NSPS Subpart DDa, and the Coalition's comments on specific elements of the proposed rules, namely: (i) several amendments to Subpart DD and (ii) the proposed successor to Subpart DD, *i.e.*, Subpart DDa.

I. EXECUTIVE SUMMARY

The Coalition's major points as set forth in this comment letter are as follows:

A. <u>Authority to Retain a Grain Elevator NSPS to Govern Future Construction</u>

EPA lacks authority to retain an NSPS to govern PM emissions from future construction events at grain elevators – *i.e.*, from "affected facilities" on which construction, modification or reconstruction commences after July 9, 2014. That is because EPA's proposal package lacks a rational basis for concluding that such events present a significant risk to human health and welfare on a national scale, within the meaning of section 111(b) of the CAA. For instance, EPA failed to take fully into account the strong abilities of air pollution control agencies at the state, local and tribal level to manage grain-elevator PM emissions sufficiently to assure timely attainment and maintenance of the PM2.5/10 NAAQS. To retain an NSPS to govern future grain elevator construction events would be, on the basis of the present record, in excess of EPA's authority and arbitrary as well as capricious.

For the same reasons, EPA's ICR is incomplete and therefore cannot be approved by OMB lawfully. EPA, in effect, has failed to establish, as required by the Paperwork Reduction Act, that Subpart DDa would be "necessary," in the sense of being authorized.

B. <u>Clarification of Subpart DD</u>

EPA's proposal to clarify the terms "grain unloading station" and "grain loading station" helps to better reflects the nature of those stations. On the other hand, EPA's proposal to

"clarify" the performance standard applicable to grain unloading stations leads to uncertainty. EPA would lack authority to expand the scope of Subpart DD to include continuous barge unloaders (CBUs), if that is EPA's intent.

C. Cost-Benefit Relationship for the Newly Added Elements in Proposed Subpart DDa

EPA's analysis of the costs and benefits (*i.e.*, reduced PM10 emissions) attributable to the newly added elements in proposed Subpart DDa significantly understates the costs. But, whether one looks at EPA's analysis or the Coalition's, it is clear that the costs are exorbitant in relation to the benefits. Specifically, according to EPA's calculations, the added elements would produce a PM10 reduction of only 31 tons per year, at a annualized cost of $36,000 per ton removed. According to the Coalition's calculations, the annualized cost is much higher: $51,175 per ton removed. Such a huge disparity between benefit and cost means that (i) the new applicability provisions cannot meet CAA section 111(b)'s test of "appropriateness," (ii) the new substantive control requirements cannot meet section 111(b)'s test of "best system of emission reduction" (BSER), and (iii) the new compliance assurance measures cannot meet section 114's test of "reasonableness," or the PRA's tests of "necessity" and "practical utility." To establish those added Subpart DDa elements in final form would be exceed EPA's authority under the CAA, be arbitrary and capricious, and violate the PRA.

D. Provisions Governing Applicability of Subpart DDa

Although EPA is required under section 111(b) of the CAA to conduct a *comprehensive* review of a given NSPS, EPA has carried many applicability provisions from Subpart DD into proposed Subpart DDa without questioning their merits in the current context, almost 35 years after the original promulgation of Subpart DD. In the Coalition's view, EPA should: (i) exclude "grain storage elevators, *i.e.*, elevators at certain grain processing plants; (ii) raise the current applicability triggers from 1.0 million/2.5 million bushels of permanent storage capacity to at least 3.5 million/8.8 million bushels.at least; and (iii) continue to exclude TSFs from the calculation of permanent storage capacity.

Further, even if EPA could justify the inclusion of TSFs in that calculation as being "appropriate" within the meaning of section 111(b), the agency has failed to justify adequately the proposed discount formulas it would use for adding a fraction of TSF capacity to an elevator's total permanent storage capacity. For example, EPA's choice of 0.34 as the default ratio for fractional inclusion of TSF capacity is flawed and grossly overestimates the air quality significance of TSFs on a national scale. The current database shows that an average bushel of permanent storage is equivalent to about 10 bushels of temporary storage on an uncontrolled emissions basis. In other words, on average, one bushel of permanent storage results in nine times the annual emissions of a bushel of temporary storage (when compared on an uncontrolled emissions basis). If TSF capacity is counted at all, something the Coalition disputes, the default TSF ratio at most should be 0.1.

Finally, EPA should exempt from Subpart DDa: (i) any truck unloading station dedicated exclusively to a TSF, (ii) wire-screen column grain dryers; and (iii) *en masse* barge unloading

technology. The PM emissions from those facilities are far too inconsequential nationally to justify treating the facilities as "affected facilities" for purposes of section 111(b).

E. Emissions Standards in Proposed Subpart DDa

EPA lacks a rational basis for the opacity standards it proposes to incorporate into Subpart DDa, including those previously in Subpart DD, which purport to govern *fugitive* emissions of grain dust. Instead, the Coalition urges, EPA to use work-practice standards to control such emissions, assuming the control is "appropriate" in the first instance. First, neither the record used in the original promulgation of Subpart DD, nor the present record, contain any evidence that EPA has validated Method 9 as to accuracy and precision for use in measuring the opacity of fugitive emissions of grain dust. Second, even if EPA had validated Method 9 for that purpose, the record contains too little emissions testing data for determining emissions variability accurately and therefore for setting achievable opacity standards rationally, as required by the CAA.

Further, EPA's proposal would apply the emission standards to all operating scenarios, including startup, shutdown and malfunction (SSM) events. If EPA were to finalize that approach, it would violate the section 111(b)'s requirement that emission standards be achievable at all times.

To establish Subpart DDa's opacity standards in final form would exceed EPA's authority, and be arbitrary and capricious.

F. Added Compliance Assurance Measures

EPA's proposal, if finalized, would increase the burden of performance testing, parameter monitoring, notifications, reporting and recordkeeping substantially. As both EPA's and the Coalition's cost-benefit analyses show, that burden is exorbitant in relation to the emissions control benefit and, therefore, unlawful. Further, it is not "reasonable" within the meaning of section 114 of the CAA, and does not pass muster under the PRA's tests of necessity, practical utility, and minimization of burden.

G. Economic Impact Assessment

EPA has failed to explain sufficiently why it has performed a cost/benefit analysis only of the provisions in proposed Subpart DDa that are additional to the provisions of current Subpart DD, and has not also performed a cost/benefit and economic impact analysis of all of the provisions of proposed Subpart DDa. The preliminary indications are that E.O. 12866 and section 317 of the Clean Air Act require a full regulatory impact assessment of all of those provisions. EPA's failure to explain its actions means that it cannot precede to final action lawfully until it does.

H. Overarching Conclusion

In the Coalition's view, the record that EPA has compiled is insufficient to support *each* of the key components of proposed Subpart DDa, namely: (i) the threshold determination that new, newly modified and newly reconstructed grain elevator "affected facilities" present a significant future risk to human health and welfare, (ii) the proposed Subpart DDa applicability criteria, (iii) the proposed opacity standards themselves and their application to malfunction events, (iv) the compliance assurance measures, and (v) the foundational confidence that benefits justify costs. EPA is not ready yet to establish a defensible rule in final form. Much more work is needed. Therefore, the Coalition urges the EPAto withdraw the present proposal, with the effect of removing July 9, 2014, as the dividing line between "new" and "existing" facilities, and then re-propose, if at all, once it has established an adequate record. Similarly, EPA also should withdraw its ICR.

II. BACKGROUND

A. <u>Legal Landscape</u>

1. CAA's Framework for Establishing and Later Reviewing an NSPS

Section 111(b) of the CAA, a central element of that statute since 1970, sets the framework for EPA's issuance and subsequent revision of an NSPS, such as Subpart DD. As EPA stated when it promulgated Subpart DD more than 35 years ago, in 1978: "The overriding purpose of standards of performance is to prevent *new air pollution problems* from developing by requiring maximum feasible control of emissions from new, modified, or reconstructed sources at the time of their construction." 43 Fed. Reg. 34340, 34341 col. 3 (Aug. 3, 1973) (emphasis added). *Accord, National Asphalt Pavement Ass'n v. EPA,* 539 F.2d 775, 783 (D.C. Cir. 1976). In the preamble to the instant rulemaking proposal, EPA echoed that statement of purpose, as follows: "The primary purpose of the NSPS is to attain and maintain ambient air quality by ensuring application of the best system of emission reduction … that has been adequately demonstrated, taking into consideration the cost of achieving such emission reductions, and any non-air quality health and environmental impact and energy requirements." 79 Fed. Reg. at 39243 col. 2.

To fulfill that purpose, section 111(b) requires EPA first to list those categories of stationary sources whose emissions of air pollutants present prospectively a significant risk to human health and welfare. EPA then is to set "standards of performance" for new, modified and reconstructed "sources" within each listed category. EPA has broad discretion in determining which types of emitting equipment within a source category to target for a "standard of performance" (*i.e.*, so-called "affected facilities") and for which pollutants. *See, e.g.*, CAA § 111(b)(1)(B), 42 U.S.C. § 7411(b)(1)(B) ("After considering such comments, [the Administrator] shall promulgate … such standards *with such modifications as he deems appropriate*." (Emphasis added.)).

For purposes of section 111(b), a "standard of performance" is defined as "a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emissions reduction which (taking into account the cost of achieving such reduction and any nonair quality health or environmental impact and energy

requirements) the Administrator determines has been adequately demonstrated." CAA § 111(a)(1), 42 U.S.C. § 7411(a)(1). "An adequately demonstrated system is one which has been shown to be reasonably reliable, reasonably efficient, and which can reasonably be expected to serve the interests of pollution control without becoming *exorbitantly* costly in an economic or environmental way." *Essex Chemical Corp. v. Ruckelshaus,* 486 F.2d 427, 433 (1973), *cert. denied*, 416 U.S. 969 (1974) (emphasis added). Such a system of emissions reduction is commonly referred to as "BSER". To qualify as a "standard of performance," a standard also must limit emissions "on a continuous basis." CAA § 302(k), 42 U.S.C. § 7602(k).

While EPA has broad discretion in making the necessary determinations under section 111(b), it must adhere not only to that section's specifications, but also to fundamental principles of rationality. *See, e.g.,* CAA § 307(d)(9)(A), 42 U.S.C. § 7607(d)(9)(A) (the reviewing court "may reverse any such action found to be … arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law"). The U.S. Supreme Court outlined those principles in its landmark decision in *Motor Vehicle Manufacturers Assoc. v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29 (1983), as follows:

> The scope of review under the "arbitrary and capricious" standard is narrow and a court is not to substitute its judgment for that of the agency. Nevertheless, the agency must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made. In reviewing that explanation, we must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment. Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise. The reviewing court should not attempt itself to make up for such deficiencies; we may not supply a reasoned basis for the agency's action that the agency itself has not given.

Id. at 43 (quotation marks and citations omitted).

Implicit in the *State Farm* framework is that an agency has the burden of proof initially. The bedrock principle of reasoned decision-making requires that the issuing agency in the first instance demonstrate, on the basis of "substantial evidence," that its decision on a particular issue is reasonable. If an agency fails to carry that burden, then the reviewing court is obliged to reverse the decision. *See NACWA v. EPA,* 734 F.3d 1115, 1148 (D.C. Cir. 2013); *Northeast Maryland Waste Disposal Authority v. EPA,* 358 F.3d 936, 954 (D.C. Cir. 2004); and *National Lime Assoc. v. EPA,* 627 F.2d 416, 432 (D.C. Cir. 1980) ("we think an initial burden of promulgating and explaining a non-arbitrary, non-capricious rule rests with the Agency").

Thus, to establish an NSPS for a new, modified, or reconstructed "affected facility" under that statutory framework properly, EPA must undertake a great deal of analysis, including collecting and studying factual data and making and explaining its determinations. As noted above, the pivotal threshold determination is whether the relevant source category presents a significant risk to human health and welfare on a national scale. Consequently, EPA must develop an adequate factual record and reasoned analysis on the following forward-looking topics: (1) the risk presented to public health and welfare in the abstract by the type of pollutant or pollutants emitted by the source category in question; (2) the incidence and volume of emissions of such pollutants resulting from new growth in the category in the future; (3) the extent to which adequate controls on those future emissions will occur, without a federal NSPS, due to state/local regulation, physical realities, and economics; and (4) the availability of cost-effective control technologies for the pollutant-emitting equipment at issue. *See generally, National Asphalt,* 539 F.2d at 783-85.

Once EPA has determined that a particular source category is "significant" within the meaning of section 111(b), it must (1) evaluate each piece of emitting equipment within the category from the standpoint of emission levels, available controls, and other factors; and (2) reach a judgment about whether it would be "appropriate" to establish a standard for the equipment and, if so, the scope of the particular "affected facility" and the target pollutant(s).

Then, EPA must perform an analysis of applicable demonstrated control technology and associated costs and benefits, including cost-effectiveness, and reach a judgment about what would constitute BSER. To determine cost-effectiveness, EPA typically calculates, on absolute and incremental bases, the annualized ratio of the emissions reduction accomplished by a particular control technology as against the cost of installing and operating the technology.

Finally, the Agency must craft an emission limitation and test methodology that represent the application of BSER with an adequate compliance margin, taking into account variability in raw material, fuel content, equipment behavior and other factors. *See generally National Lime Assoc. v. EPA,* 627 F.2d 416 (D.C. Cir. 1980).

In sum, to establish an NSPS validly, EPA must make fact-dependent judgments at four levels: (1) whether the category is "significant;" (2) which equipment and emissions within a category would be "appropriate" to regulate; (3) what constitutes BSER for each such piece of equipment, taking costs and other factors into account; and (4) what specific emission limit would be reasonable and achievable, taking variability in various factors, such as raw material inputs, into account. At the same time, EPA must compile an adequate record and adequately explain how that record justifies its judgments.

Recognizing that the factual underpinnings for an NSPS can change materially over time, Congress required EPA to review its listings of the "significant" source categories "from time to time" and make appropriate changes. CAA § 111(b)(1)(A), 42 U.S.C. §7411(b)(1)(A). Further, it required EPA to review each specific NSPS and revise it, as appropriate, every eight years: "The Administrator shall, at least every 8 years, review and, if appropriate, revise such standards …." CAA § 111(b)(1)(B), 42 U.S.C. § 7411(b)(1)(B).

2. Paperwork Reduction Act

The Paperwork Reduction Act (PRA) was enacted originally almost 30 years ago, and then overhauled and re-affirmed in 1995. It bars a federal agency, such as EPA, from conducting or sponsoring a collection of information unless OMB has found in advance that the collection meets specified substantive and procedural requirements. *See, e.g.,* 44 U.S.C. § 3507(b); 5 CFR § 1320.5(a). The PRA expressly limits a federal agency's authority, stating that: "[T]he authority of an agency under any other law to prescribe policies, rules, regulations, and procedures for Federal information resources management activities is subject to the authority of [OMB under the PRA]." 44 U.S.C. § 3518(a).

The PRA allows OMB to approve an information collection only if OMB has first determined that the collection is necessary and has "practical utility." *See, e.g.,* 44 U.S.C. § 3508. Further, OMB must ensure that the information collection burden has been estimated accurately and rationally (*e.g.,* transparently, with objective support), and minimized to the extent possible. *See, e.g.,* 44 U.S.C. §§ 3501(1)-(2), 3506(c); 5 CFR §§ 1320.5(d), 1320.8(a) & (d), & 1320.9. In sum, a collection of information has integrity under the PRA only if the collection is necessary, useful, estimated rationally, and minimized. *See also* U.S. EPA (OEI-CSD), *ICR Handbook, EPA's Guide to Writing Information Collection Requests Under the Paperwork Reduction Act of 1995* (Revised November 2005); OMB, *The Paperwork Reduction Act of 1995: Implementing Guidance,* at 37-38 (Preliminary Draft, Feb. 3, 1997).

The PRA expressly requires an agency, in seeking OMB approval, to "certify (*and provide a record* supporting such certification …)" that the information collection in question "is *necessary* for the proper performance of the functions of the agency," as well as useful, estimated rationally, and minimized. 44 U.S.C. § 3506(c)(3) (emphases added). *See also* 5 CFR § 1320.9. Moreover, the PRA expressly bars an agency from conducting an information collection if the agency has failed to provide that certification, together with a supporting record. 44 U.S.C. § 3507(a)(1)(C). *See also* 5 CFR § 1320.5(a)(1)(iii)(A). In sum, an essential predicate under the PRA for OMB approval of an agency's information collection – or for renewal of a prior approval – is the submission by the agency of a certification that the information collection is necessary *and* a record adequate to support that certification. That requirement parallels the requirements of the CAA (and administrative law generally) for reasoned (non-arbitrary, non-capricious) decision-making by federal agencies.

In addition to those substantive tests, the PRA imposes procedural requirements, in part to ensure that the public has a full opportunity to participate in the decision-making of the originating agency and then OMB. *See, e.g.,* 5 CFR § 1320.8(d)(1). Under the PRA, an OMB approval of an ICR expires after three years from issuance. As a result, federal agencies, including EPA, typically prepare, vet, and submit ICRs on three-year cycles.

To enforce all of those requirements, the PRA erects an absolute shield against penalties for any person who has refused or otherwise failed to comply with a collection of information

requiring OMB approval, but lacking such approval. *See* 44 U.S.C. § 3512(a); 5 CFR § 1320.6. The PRA trumps all other federal statutes in this respect. *See, e.g., Saco River Cellular, Inc. v. FCC,* 133 F.3d 25, 30 (D.C. Cir., 1998).

3. Executive Order 13563

In January 2011, President Obama issued Executive Order 13563, with the aim of improving federal regulations and regulatory review. 76 Fed. Reg. 3821 (Jan. 21, 2011). In relevant part, he called on federal agencies to review their rules retrospectively to weed out or amend those provisions that are "outmoded, ineffective, insufficient, or excessively burdensome." *Id.* at 3822 (§6). E.O. 13563 declares unequivocally that "[o]ur regulatory system … must be based on the best available science." *Id.* at 3821 (§1).

B. <u>Relevant History of NSPS Subpart DD for Grain Elevators</u>

1. Original Subpart DD Rulemaking (1977-78)

In early 1977, EPA proposed to list the general category of "grain elevators" as an NSPS target and to establish in the form of Subpart DD various emission standards for a range of new, modified, or reconstructed "affected facilities" at a wide range of grain elevators, including relatively small ones. *See* 42 Fed. Reg. 2812 (Jan. 13, 1977). That same year, as part of a larger overhaul of the CAA, Congress barred EPA from applying any NSPS to "country elevators (as defined by the Administrator) which have a storage capacity of less than two million five hundred thousand bushels." CAA § 111(i), 42 U.S.C. § 7411(i). That prohibition remains in section 111.

About one year after Congress did that, EPA promulgated Subpart DD. *See* 43 Fed. Reg. 34340 (Aug. 3, 1978). EPA reaffirmed its judgment that "grain elevators" as a general category present a significant risk to human health and welfare. EPA gave the following reasons for its actions (43 Fed. Reg. at 34341-42):

- At the time, EPA believed that the full range of particulate matter, *i.e.*, total suspended particulate matter ("TSP"), as a general class, causes adverse health and welfare effects. In 1971, EPA had set primary and secondary National Ambient Air Quality Standards ("NAAQS") for TSP. 36 Fed. Reg. 8186 (Apr. 30, 1971). Those NAAQS were still in effect in 1978.

- Many of the operations at grain elevators would emit, absent the application of control technology, significant amounts of TSP. According to EPA, the Senate committee report from which the 1970 CAA in part emerged specifically targeted grain elevators for listing under section 111. Also, according to EPA, an EPA study which was aimed at prioritizing NSPS development "ranked grain elevators relatively high." 43 Fed. Reg. at 34342 col. 1.

- Growth within the grain elevator category over the coming five years, 1978-1984, would be substantial, triggering the application of the promulgated NSPS to approximately 200 sizable grain elevator operations – *i.e.,* 40 per year.

- Readily-available and cost-reasonable control technology exists, in the form of enclosures and fabric filters.

- The promulgated NSPS would reduce TSP emissions by "70 to 90 percent compared to emission limits contained in State or local air pollution regulations." *Id.* at 34341 col. 1. Consequently, those standards would "reduce [TSP] emissions by 11,000 metric tons over the next 5 years." *Id.* cols. 1-2.

- Thus, a NSPS for grain elevators would serve the primary purpose of section 111, in that it would be "helpful" in attaining and maintaining compliance with the NAAQS for TSP. *Id.* at 34341 col. 3.

At the same time, EPA deliberately added to Congress' carve-out of so-called "country elevators" with capacity less than 2.5 million bushels an exemption for another large subcategory, *i.e.,* grain elevators at various grain-processing mills with grain storage capacity less than 1.0 million bushels. EPA explained that: "These processors are considered to be relatively small sources of particulate matter emissions *that are best regulated by State and local regulations*." 43 Fed. Reg. at 34342 col. 1 (emphasis added).

Going beyond the threshold question of "significance," EPA determined that it would be appropriate to establish NSPSs only for certain new, modified, or reconstructed "affected facilities" located at certain kinds of grain elevators, and then only for particulate matter (*i.e.,* essentially TSP). Those types of "affected facilities" span various kinds of loading and unloading operations, certain grain dryers, and grain handling equipment, providedthey are located at either a "grain terminal elevator" or a "grain storage elevator." The former subcategory, which reflects the congressional prohibition in section 111(i), is in general "any grain elevator which has a permanent storage capacity of more than [2.5 million U.S. bushels] …." The latter is in general "any grain elevator located at [certain grain processing plants] which has a permanent grain storage capacity of [1.0 million U.S. bushels]." EPA defined "permanent storage capacity" as "grain storage capacity which is inside a building, bin, or silo." Thus, the applicability of the Subpart DD emission standards to a new or modified piece of equipment at a grain elevator turns at the threshold on a complex set of factors, including (1) the type of equipment; (2) the role of the host elevator (*i.e.,* serving grain distribution or grain processing); and (3) the amount of permanent storage capacity at the elevator. The definitions of modification and reconstruction, however, then present another layer of factors. For instance, a physical change at an elevator is a "modification" only if it would cause an increase in PM emissions within the ambit of the relevant "affected facility." *See* 40 CFR § 60.14. Finally, section 304(b) of Subpart DD contains various exclusions from applicability.

2. EPA's Review of Subpart DD in 1984

In January 1984, EPA completed an internal review of Subpart DD pursuant to the periodic review requirement of section 111(b)(1)(B), recounting its analysis and conclusions in a support document.[2] EPA decided not to make any changes to Subpart DD because, in its view, no significant change in the underlying circumstances had occurred.[3] EPA noted, however, that "only six NSPS grain elevators have started operation or been modified" since 1978, thereby triggering applicability of Subpart DD. In 1978, in contrast, EPA had estimated that 200 grain elevators would come under Subpart DD during 1978-1984.[4] Also, EPA surveyed the relevant emission control requirements of state and local agencies, concluding that: (1) all apply opacity limits of 20 percent generally for new facilities emitting TSP, including grain elevators; (2) most have so-called "process-weight" regulations setting limits on emissions of particulates according to the amount of material being processed; and (3) a few have air pollution control regulations specifically targeting grain elevators.[5]

3. EPA's Actions Relating to Subpart DD Since 1984

During the time span, between EPA's review of Subpart DD in 1984 and publication of the instant proposal in July 2014, a period of over three decades, EPA undertook no rulemaking to review or alter the text of Subpart DD. However, EPA did take several other actions affecting Subpart DD.

First, in 1987, EPA abandoned TSP as an indicator for NAAQS purposes of those particles causing adverse health and welfare effects. Instead, EPA adopted PM10 as an appropriate indicator. *See* 52 Fed. Reg. 24634 (July 1, 1987). At the time, EPA expressly acknowledged that the repeal of TSP as an indicator could undermine existing NSPSs, but decided to address that possibility in the context of the "review" of each NSPS on eight-year cycles. *Id.* at 24710 col. 2. Meanwhile, while EPA has retained PM10 as an indicator, the Agency has shifted its focus increasingly to PM2.5. *See* 62 Fed. Reg. 38652 (July 18, 1997); 71 Fed. Reg. 61144 (Oct. 17, 2006).

Second, in response to those major changes in the NAAQS for particulates, EPA has updated the relevant emission factors in cornerstone guidance known as "AP-42." Those updated factors show that emissions of PM10 and PM2.5 from the grain elevator operations constituting "affected facilities" under Subpart DD are only a fraction of the TSP emissions from those same operations, and vary considerably from operation to operation, as the chart below[6] illustrates:

Operation	PM10%	PM2.5%

[2] *See* OAQPS, *Review of New Source Performance Standards for Grain Elevators* (EPA-450/3-84-001) (Jan. 1984) (hereinafter, the "*1984 Review*").

[3] *See id.* Section 1 (Executive Summary).

[4] *Id.* at page 1-2.

[5] *See id.* at 3-2 to 3-3.

[6] Derived from AP-42, Chapter 9, Section 9, 3-2003 edition. AP-42 is accessible at: http://www.epa.gov/ttn/chief/ap42/.

	of TSP	of TSP
Straight Truck Receiving	33	6
Hopper Truck Receiving	22	4
Grain Handling	56	10
Grain Shipping (Truck)	34	6

Third, in November 2007, EPA's Office of Enforcement and Compliance Assurance (OECA) issued an "opinion" that the phrase "permanent storage capacity" as it appears in the applicability provisions of Subpart DD encompasses temporary storage facilities (TSFs).[7] TSFs differ greatly from classic grain silos, as well as emergency piles, in that they consist of sidewalls, a hard bottom surface, a tarp, and an aeration system. The grain industry strenuously objected to OECA's opinion and promptly sought its withdrawal.[8] In response, OECA recently rescinded that opinion, adding that: "TSFs do not meet the definition of 'permanent storage capacity' under Subpart DD and should not be included when determining applicability under Subpart DD for a particular facility."[9]

Fourth, in 2011, EPA responded to E.O. 13563 with a request for public input on its plans for conducting retrospective reviews of existing regulations and in particular for nomination of rules that EPA should target initially. 76 Fed. Reg. 9988 (Feb. 23, 2011). In response, the Coalition nominated Subpart DD by means of a letter dated April 4, 2011. The letter showed in detail that events over the prior 34 years had so eroded the foundation of Subpart DD, especially the original listing decision, that Subpart DD no longer had legitimacy under section 111(b) and therefore should be repealed.

Prompted by the Coalition's nomination, EPA in mid-2011 added Subpart DD to its list of initial targets for retrospective review, as detailed in its plan for implementing E.O. 13563.[10] The instant rulemaking is a fulfillment of that commitment to examine through a rulemaking process whether Subpart DD remains viable. *See, e.g.*, 79 Fed. Reg. 39242 col. 1. It is also a response to the Coalition's February 6, 2012 petition for repeal of Subpart DD.[11] EPA's proposal, argues on the basis of a study it conducted, that Subpart DD has been viable throughout the past 30 years and, with the proposed amendments (Subpart DDa), would remain so into the indefinite future. As discussed below, the Coalition disputes that any NSPS for grain elevators would be viable on a going-forward basis.

Finally, throughout the history of Subpart DD, EPA has prepared, vetted and submitted ICRs for that NSPS on three-years cycles. The result is that EPA has submitted, and obtained

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[7] See Letter dated November 21, 2007, from Michael Alushin (OECA) to Kendell Keith (NGFA President).

[8] *See, e.g.*, Letter dated May 14, 2010, from NSPS Subpart DD Coalition to EPA Administrator Jackson (hereinafter, the "*Petition for Rescission*") (Exhibit C to the Coalition's February 6, 2012 petition for repeal of Subpart DD, which petition appears in the docket for the instant rulemaking as EPA-HQ-OAR-2010-706-0082).

[9] Letter dated July 1, 2014, from Edward Messina (OECA) to Co-Chairs of NSPS Subpart DD Coalition.

[10] *See* USEPA, *Improving Our Regulations: Final Plan for Periodic Retrospective Reviews of Existing Regulations*, at 33 (Aug. 2011) (http://www.epa.gov/regdarrt/retrospective/).

[11] EPA-HQ-OAR-2012-0706-0082.

OMB approval for, 11 ICRs. Each of those ICRs has estimated the number of grain elevators that would become subject each subsequent year to Subpart DD by virtue of the addition or modification of TSP-emitting equipment.[12] The chart below shows the year EPA submitted an ICR and EPA's corresponding estimate of the number of elevators that annually would be subjected for the first time to Subpart DD by virtue of new "greenfield" construction or else modification or reconstruction.

Year of ICR Submission	**Annual Newly-Subject Elevators**
1984	2
1987	4
1989	4
1990	2
1993	1
1996	(not known)
1999	3
2002	3
2006	3
2009	0
2012	0

In contrast, EPA's most recent ICR, applicable this time to proposed Subpart DD, estimates that 24 new, modified or reconstructed elevators per year for the coming three years will come under Subpart DDa.[13] As explained below, the Coalition disputes EPA's most recent estimate as being unfounded and most likely far too high.

4. EPA's July 2014 Rulemaking Proposal on Review of Subpart DD

EPA's review of Subpart DD, as reflected in the instant rulemaking proposal, is extensive, in that it addresses (1) the threshold issue of whether grain elevators remain prospectively a "significant" category from an air quality management standpoint; (2) various applicability issues, including the degree to which the capacity of TSFs should count as "permanent storage capacity"; (3) whether developments in air pollutant control technology over the past 35 years call for greater stringency in Subpart DD's PM standards; and (4) the need for enhancing the rule's compliance assurance measures. Further, the proposal contains a regulatory impact analysis and a proposed ICR. Finally, for grandfathering purposes, it distinguishes between current Subpart DD, as promulgated in 1978, and a newly amended version of Subpart DD which takes the form of Subpart DDa. The former would apply to "affected facilities" on which construction, modification or reconstruction commenced after 1978 and before the date of the proposal(July 9, 2014). Correspondingly, proposed Subpart DDa would apply to "affected facilities" on which those actions occur after July 9, 2014.

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[12] *See* http://www.reginfo.gov/public/do/PRASearch [OMB Control No. 2060-0082].

[13] *See Supporting Statement*, Environmental Protection Agency, Standards of Performance for Grain Elevators (40 CFR part 60, Subpart DDa), at 2 (Jan. 2014) (EPA-HQ-OAR-2010-0706-0097) (hereinafter, the "*2014 ICR Supporting Statement*").

III. LEGITIMACY OF PROPOSED SUBPART DDa UNDER THE CLEAN AIR ACT, THE PAPERWORK REDUCTION ACT, AND E.O. 13563

In the instant rulemaking, EPA proposes to keep current NSPS Subpart DD in effect, albeit with some amendments, but only with respect to "affected facilities" on which construction, modification or reconstruction commenced between August 1978 and July 2014. At the same time, EPA proposes to keep a more stringent version of Subpart DD, *i.e.*, Subpart DDa, in place for "affected facilities" on which those activities commenced *after* July 9, 2014.

The Coalition has elected not to contest the first of these EPA proposals, subject of course to the Coalition's comments in the rest of this letter on other aspects of Subpart DD/DDa. But it strongly objects to the second one. The CAA, and derivatively the PRA, and E.O. 13563, each allow EPA to apply an NSPS to a particular source category on a going-forward basis (*i.e.*, to the category's "affected facilities" on which construction, modification, or reconstruction commence after the date of proposal) only if the Agency has carried successfully its burden of showing that the category presents, on a going-forward basis, a significant risk to human health and welfare nationally. As detailed below, the Coalition believes EPA has failed in the instant rulemaking to provide an adequate, forward-looking "significance" demonstration. Consequently, EPA lacks authority to put Subpart DDa into effect in final form.

A. <u>Legal Background</u>

Under the CAA, the lawfulness of an NSPS, to the extent it governs newlyarising "affected facilities" and modifications to them, continues only for so long as EPA's underlying "significance" determination remains valid. Section 111(b) requires EPA, once it has made the necessary "significance" determination for a category initially and established emission standards for new, modified, or reconstructed "affected facilities" in the category, to revisit and revise the determination "from time to time" and the standards every eight years. *Id.* §§ 7411(b)(1)(A) & (B). Thus, Congress intended to impose on EPA a duty not only to reevaluate the original "significance" determination periodically, but also to adjust or repeal the standards according to changed circumstances. That implied intent is echoed and thereby reinforced by section 307(b)(1) of the CAA, 42 U.S.C. § 7607(b)(1), which provides that a court may review and overturn a CAA rule, such as an NSPS, based upon grounds arising long after promulgation of the rule and passage of the normal 60-day period for petitioning for judicial review. *See Oljato Chapter of the Navajo Tribe v. Train*, 515 F.2d 654, 660 (D.C. Cir. 1975) ("Congress sought in Section 307 to provide a legal mechanism – and an exclusive one – *to assure that standards were revised whenever necessary.*" (Emphasis added.)). *See also Group Against Smog and Pollution, Inc. v. EPA*, 665 F.2d 1284, 1289-90 (D.C. Cir. 1981); and *Columbia Falls Aluminum Company v. EPA*, 139 F.3d 914, 921 (D.C. Cir. 1998). EPA's duty to adjust or repeal an NSPS also is embodied, as discussed above, in section 307(d)(9) of the CAA, 42 U.S.C. § 7607(d)(9), which holds EPA's actions to the principles of rationality In *Oljato*, the D.C. Circuit stated: "We have no doubt that it would be an abuse of discretion for the Administrator to fail to revise a standard of performance *when the evidence supporting revision became sufficiently compelling.*" *Id.* at 662 (emphasis added). Failure to thus revise (or repeal) would be arbitrary and capricious within the meaning of section 307(d)(9). In short, EPA is obliged by the CAA to reexamine each "significance" determination periodically and, if the determination no longer is

supportable, to make a new determination and then corresponding adjustments to the NSPS, or repeal the NSPS prospectively. An NSPS cannot outlive its fundamental premise that the source category in question is nationally "significant."

Similarly, the PRA is structured to place a duty on a federal agency, in this case EPA, to re-examine periodically and then renew or repeal a collection of information built into a particular regulation. First, as documented previously, the PRA forces the agency and OMB to reexamine an information collection on three-year cycles by allowing each OMB approval to have effect only for three years. Second, the PRA expressly requires an agency, in seeking OMB approval, to "certify (*and provide a record* supporting such certification …)" that the information collection in question "is *necessary* for the proper performance of the functions of the agency," as well as useful, estimated rationally, and minimized. 44 U.S.C. § 3506(c)(3) (emphases added). Thus, an essential predicate under the PRA for OMB approval of an agency's information collection – or for renewal of a prior approval every three years – is the submission by the agency of (i) a certification that the information collection is necessary; *and* (ii) a record adequate to support that certification. An information collection would not be "necessary" within the meaning of the PRA if the rule that contains it is unauthorized under the relevant statute. In other words, if Subpart DD is obsolete such that its application to future events is unauthorized, then it also is not "necessary" for purposes of the PRA and OMB must refuse to approve the information collections required by Subpart DD or its successor.

Finally, by means of E.O. 13563, the President directed each federal agency to take affirmative action to review existing rules and to prune or weed out those provisions that are "outmoded, ineffective, insufficient, or excessively burdensome." *Id.* at 3822 (§6). Moreover, the President expressly upheld the principle that "[o]ur regulatory system … must be based on the best available science." *Id.* at 3821 (§1). E.O. 13563 thus creates a duty that parallels the duties imposed by the CAA and PRA – *i.e.*, the duty affirmatively to reexamine Subpart DD on a going-forward basis and to adjust or repeal it as changed circumstances warrant.

In sum, the CAA, the PRA and E.O. 13563 each place on EPA in the instant rulemaking a duty to reexamine its 1978 "significance" determination; determine whether grain elevators still present a significant risk on a going-forward basis; establish an adequate record to support that determination; and make such changes to Subpart DD as fit the changed circumstances, including potential repeal of its applicability to future events.

B. <u>EPA's Determination in the Instant Rulemaking of the "Significance" of Subpart DD on a Going-Forward Basis</u>

The record here shows that EPA in effect did reexamine, albeit from the standpoint of E.O. 13563, its original "significance" determination in light of developments over the past 30 years since the last "review" of Subpart DD in 1984. EPA concluded, in relevant part, that an NSPS for grain elevators should continue in effect to govern future construction, modification or reconstruction of grainelevator "affected facilities." *See* 79 Fed. Reg. at 39260-61; ERG, *Evaluation of the Grain Elevator Emission Standards in Response to Executive Order 13563,* at 18-19 (Dec. 2013) (EPA-HQ-OAR-2010-0706-0098) (herein, the "*Significance Evaluation"*).

EPA's basis for that conclusion was two-fold: (i) an internet search for expansions of grain elevator capacity within the past five years; and (ii) USDA statistics on U.S. grain production. According to EPA, the internet search showed that three new grain elevator plants of a size sufficient to trigger Subpart DD were constructed during the 1984-2014 period. 79 Fed. Reg. at 39260 col. 3. From that historical data, EPA projected that "grain elevators are continuing to be constructed." *Id.* Further, EPA reported that the USDA statistics show that grain production is "high" in recent years. *Id.* On that basis, EPA supposed that for those years "many units added capacity, either as permanent or temporary storage, if a new greenfield facility was not constructed." *Id.* EPA, however, acknowledged that it "cannot be determined" quantitatively what the rate of new construction and modification of grain elevators will be in the future, much less the potential for such events to trigger the applicability of Subpart DD requirements. *Id.* Further, from USDA statistics on annual production of seven key grains (*i.e.*, corn, sorghum, barley, oats, wheat, rice and soybeans), EPA extracted the projection that the net production of those seven grains will rise during the decade of 2010-2020 by 2.79 billion bushels, *i.e.*, by 14.8 percent. From that projection, EPA supposed that "there will be a significant increase in the demand for grain storage." *Id.* at 39260 col. 1. Finally, EPA concluded: "Based on activities of the previous years in the grain elevator industry, a combination of new elevators and increased capacities for existing elevators is expected." In its *Significance Evaluation*, EPA made no attempt to quantify the annual "birth" rate of NSPS-affected new, modified or reconstructed grain elevators on a going-forward basis. Nor did it make any attempt to quantify how much of any projected increase in storage capacity would occur on-farm, despite the fact that the majority of U.S. storage capacity is on-farm and exempt from NSPS requirements.

In two separate technical support documents, however, EPA attempted to quantify the likely future incidence of new construction projects in the commercial grain elevator sector that would trigger the applicability of proposed new Subpart DDa. One such document reflected EPA's assessment of the incremental benefits and costs of Subpart DDa compared to a Subpart DD baseline over the upcoming five years. *See Impacts of Grain Elevator NSPS Subpart DDa Requirements* (Dec. 2013) (EPA-HQ-OAR-2010-0706-0094) (hereinafter, the "*Impact Analysis"*). The other document extrapolated that assessment to fit the upcoming three years. *See 2014 ICR Supporting Statement*.

The projections in those documents, however, are not useful as support for EPA's "significance" determination. Tellingly, EPA did not include them in the record of that determination – *i.e.*, the *Significance Evaluation*. First, neither document projects the level of future emissions reduction that would result from the *combined* effect of the current Subpart DD requirements and the increased stringency that EPA proposes to add to them, which together would take the form of Subpart DDa. In addition, each of them is geared to a different purpose. In the case of the *Impact Analysis*, the goal was to understand the cost-effectiveness of that added stringency by identifying an upper bound of the emissions reduction that might be achieved by Subpart DDa. Similarly, in the case of the *2014 ICR Supporting Statement*, the goal was to identify the upper bound of the paperwork burden that would be imposed by Subpart DDa. An upper bound is not necessarily even in the worst-case. Indeed, it might significantly exceed the worst case. Here, while it is useful for EPA to have identified upper bounds for emmissions reductions – for informational purposes on the one hand and to satisfy the PRA on

the other, EPA has no idea whether and to what extent the upper bounds equal or exceed the true worst case, or even the smaller probable case.

In sum, EPA has based its conclusion that grain elevators are "significant" enough to justify the continued application of a grain elevator NSPS to future events merely on its qualitative projections that (i) the demand for grain storage will increase significantly and, therefore, (ii) the past pattern of NSPS-affected construction events in the grain elevator sector, which EPA has overestimated greatly, will continue into the future.

C. <u>Comments of the Coalition</u>

In the instant rulemaking, EPA has failed to provide a rational basis for its new "significance" determination. In particular, EPA has failed to even articulate, much less evaluate, the implications of its two qualitative growth projections for the ability of the air pollution control community, in the absence of a grain elevator NSPS, to timely bring and keep air quality in line with NAAQS going forward. As EPA has said (as noted previously), the purpose of NSPSs is to aid in the drive to attain and maintain NAAQS compliance. Without that connection, EPA's qualitative growth projections prove nothing. They stand in stark contrast to the robust level of support that EPA marshalled for its original "significance" determination in 1978, as outlined previously. Thus, EPA has failed to carry the burden of proof that the CAA, the PRA and E.O 13563 impose, as described earlier. As a result, EPA has no authority to put Subpart DDa into final effect, or even to keep Subpart DD in effect, as to future, grain elevator-related construction events.

Moreover, even if EPA were to attempt to show that grain elevators are "significant" from the standpoint of national air quality management going forward, a great deal of evidence exists that they are not.

First, the margin of annual reduction in grain-elevator PM10 emissions that even Subpart DDa would achieve beyond the reductions attributable to state law is a miniscule fraction of national PM10 emissions. The ingredients for a highly conservative (upper-bound) estimate of that margin lies in EPA's *Significance Evaluation.* As summarized in Table 2-6 of that document (page 17), EPA estimated that the upper bound for the margin of annual PM10 reduction actually achieved by *Subpart DD* beyond state law over its 36-year lifetime is approximately 85,000 tons per year (tpy). By contrast, according to EPA's national inventory (http://www.epa.gov/ttn/chief/net/2011 inventory.html), PM10 emissions from all sectors nationwide during 2011, the most recent year for which solid national data exists, were approximately 21 million tpy. Thus, EPA's *upper bound* estimate is about four-tenths of one percent (0.4%) of national PM10 emissions at present.

That upper bound estimate, however, suffers from several serious flaws. First, an unknown but potentially large fraction of the 1077 grain elevators on which EPA based the estimate may not have been subject at all to Subpart DD, as EPA acknowledged. *See Significance Evaluation,* at 4. Second, the estimate fails to take into account the effect of state laws requiring construction permits for "major" and "minor" sources and modifications, construction permits specifically for new grain elevators and modifications, use of process

weight limits, and adherence to a general duty to protect against NAAQS exceedances. *See id.* at 7. Third, the estimate fails to take into account the efficiency improvements occasioned by more modern present-day technologies. Fourth, the past history of expansions in the grain elevator sector is not necessarily a good indicator of the level of future expansions. For instance, as explained below, USDA's statistics and general industry expectations actually indicate that the demand for commercial grain storage is likely to be stagnant at least for the next five years and perhaps beyond. Moreover, in any event, the addition of grain storage capacity by itself would not trigger the applicability of Subpart DD; it would have to be accompanied by equipment or equipment modifications that would produce a net increase in PM emissions at an "affected facility." Finally, as shown above, all of EPA's 11 prior ICRs predicted that the annual future rate of NSPS-affected grain elevators was 0-4 elevators, a prediction very much in line with EPA's best guess in its *Significance Evaluation* (page 18). Those repeatedly consistent, triannual estimates over three decades impeach the usefulness of EPA's upper bound estimates in the *Significance Evaluation*, the *Impact Analysis*, and the *2014 ICR Supporting Statement.*

Because of the first of those serious flaws, EPA also identified a lower bound margin of approximately 21,000 tpy (based an EPA database showing that Subpart DD applies only to about 350 grain elevators). Even that estimate, though, is subject to the other flaws listed above. Nonetheless, it is noteworthy that that 21,000 tpy is about one-tenth of one percent (0.1%) of the national PM10 emissions inventory for 2011. Thus, even if one accepts EPA's flawed estimates, Subpart DDa would achieve from its application to future construction at grain elevators at most a 0.1 to 0.4 percent reduction in national PM10 annual emissions, a classically *de minimis* level.

In itself, a contribution at even that 0.1-0.4 percent level to air quality control is of negligible value. But, it is further compromised not only by the flaws listed above, but by EPA's misinterpretation of USDA's data on grain production. First, the annual supply of grain, which drives demand for storage, is not a function only of grain production, as EPA hypothesized, but also of (i) imports and (ii) stocks carried over from the prior year. Second, the proper baseline year is not 2010, but rather 2014, because EPA expects to finalize Subpart DDa in 2015. Correcting for those mistakes reveals that USDA actually is forecasting for 2014-2020 a small (0.3 billion bushel) *decrease* in the supply of the seven grains on which EPA focused in its *Impact Analysis*. *See* Attachment A ("U.S. Grain Storage Capacity and Grain Supply").

Moreover, the percent of off-farm commercial storage capacity compared to total capacity has been essentially flat for 2011-2013 despite the strong incentive that existed for farmers to market grain quickly to lock in the abnormally high grain prices that existed during that period rather than storing and risking a price decline. The most recent USDA grain storage capacity data indicates that in 2013 there were 13 billion bushels of on-farm grain storage capacity versus 10.4 billion bushels of off-farm commercial grain storage capacity. In 2014, grain prices have decreased versus the 2011-2013 period and market-carry (*i.e.*, the price premium to sell grain later in the marketing year) has increased, providing incentive for farmers to further expand on-farm grain storage. In addition, a relatively new and cheaper form of grain storage, in the form of plastic grain bags, is increasingly being adopted by farmers and has made it possible for farmers to inexpensively add on-farm storage capacity. If farmers respond to current market signals and take action to expand on-farm storage capacity, the percent of off-farm commercial storage capacity compared to total capacity may decline in the future. Indeed,

the members of the companies participating in the Coalition as a whole expect little investment in expansion of off-farm commercial grain storage capacity nationwide for the foreseeable future and instead expect more investment in expansions of on-farm grain storage capacity.

This means that history, as embodied in EPA's upper and lower bound estimates, is not necessarily an accurate indicator of the air quality significance of the grain elevator category. The most that can be said is that it is a merely a starting point for taking into account (i) the state law impacts that EPA did not include (*e.g.*, minor NSR; general duty to protect the NAAQS) and (ii) the implications of USDA's prediction that grain supply will decrease between 2014 and 2020 – namely, that demand for off-farm commercial grain storage will be stagnant, contrary to EPA's superficially-supported prediction of significant increase.

Finally, while far from dispositive, it is nonetheless striking that, even using highly conservative (upper bound) guesses, the percent of the total storage capacity of the grain elevators that would become newly or additionally subject to Subpart DDa in the future is is very small compared to total U.S. storage capacity. In its *Impact Analysis*, EPA made the rough estimate that 123 grain elevators would become newly or additionally subject to Subpart DDa over a five-year period. As indicated in a subsequent section of these comments, the Coalition strongly disagrees with EPA's estimate that 90 of those elevators would become subject to Subpart DDa by virtue of modifications or reconstructions of elevators that exceed the 2.5/1.0 million thresholds. In the Coalition's view, the estimate should be zero. But, for the sake of argument, assume 17 elevators so that, together with the 33 that become subject for other reasons, there is a round number of 50. Over the five-year period that EPA posited, results in 10 elevators per year. Then make the conservative assumption that each of those 10 elevators have 4 million bushels of capacity, for a total of 40 million bushels annually. As Attachment A shows, the total U.S. capacity for 2013 is 24.3 *billion* bushels. Assuming that at least that much national capacity continues over the coming five years, Subpart DDa would apply each year only to 0.17 percent of that national capacity. Even if national off-farm capacity (*i.e.*, 10.4 million bushels) were the denominator, the percentage would be 0.39. Either way, Subpart DDa can be seen as addressing only a very small segment of the nation's annual grain storage capacity going forward. This is one more indication that continuation of an NSPS for grain elevators is of trivial importance from a national perspective.

In sum, EPA failed to provide a reasonable level of substantiation for its determination that grain elevators present a significant risk to human health and welfare on a going-forward basis. In addition, EPA's own calculations, when their flaws are taken into account, actually suggest that Subpart DDa would be only a *de minimis* help in the drive for attainment and maintenance of the PM10 NAAQS. This is particularly true when one also takes into account USDA's projection of a decrease in grain supply between 2014 and 2020, and the grain industry's qualitative sense that there will be very little investment in grain storage expansions for the foreseeable future. This failure to provide "substantial evidence" for its key conclusions on "significance" violate the principles of rationality embedded in section 307(d)(9)(A) of the CAA, as elaborated by the Supreme Court in *State Farm*, 463 U.S. 29 (1983).[14]

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[14] In the instant proposal, EPA requested comment on the potential impacts of the proposed rule – here Subpart DDa – on minority, low income and indigenous populations. *See* 79 Fed. Reg. at 39262 col. 3. The Coalition's

D. Implications

The implications of EPA's failure, together with the evidence that grain elevator emissions in fact are *de minimis* going forward, are that (i) EPA lacks authority to apply an NSPS for grain elevators on a going-forward basis, (ii) OMB must reject EPA's current ICR for proposed Subpart DDa for lack of an adequate record (much less the required "certification") showing Subpart DDa is "necessary," and (iii) EPA is obliged by E.O. 13563 to discontinue Subpart DD going forward because Subpart DD is obsolete as to future events.

IV. COMMENTS ON THE PROPOSED AMENDMENTS TO SUBPART DD AS APPLICABLE TO PAST EVENTS

Even though the Coalition believes it argues persuasively that the EPA should not apply Subpart DD or DDa prospectively, it does take this opportunity to comment upon the agency's proposed revisions to both subparts.

The Coalition appreciates EPA's effort to clarify some provisions of current Subpart DD, as it applies to grain elevators constructed, modified or reconstructed between 1978 and July 9, 2014. As described below, the Coalition supports some of those clarifications, but also seeks several more. However, the Coalition has an overarching concern that some of EPA's clarifications would impose, or might be seen as imposing, new and material regulatory requirements. EPA lacks authority to increase the stringency of Subpart DD retroactively, because there is nothing in the CAA that expressly or impliedly requires or allows EPA to do that. It is presumed by federal courts that Congress has not authorized retroactive application of a given statute unless there exists a clear statutory indication otherwise. *See, e.g., Landgraf v. USI Film Products*, 511 U.S. 244, 280 (1994); *Quantum Entertainment Ltd. v. USDOI*, 714 F.3d 1338 (D.C. Cir. 2013), *cert. denied* 134 S. Ct. 1787 (2014). The Coalition asks EPA to avoid the retroactive application of any increase in the stringency of Subpart DD as it applies to past events and expressly confirm in the preamble to the final version of Subpart DD that Subpart DD imposes no new requirements retroactively.

A. Proposed Definition of "Grain Unloading Station"

1. Receiving Hopper

The Coalition generally supports EPA's proposed changes to the "grain unloading station" definition in Subpart DD. *See* 79 Fed. Reg. at 39263 col. 1. The Coalition requests, however, that EPA add the clarification that a "receiving hopper" is part of the "grain unloading station."

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response is that current evidence strongly indicates that Subpart DDa, or even the absence of a grain elevator NSPS going forward, has negligible potential impact on such populations from an air quality management standpoint. However, as discussed below, the costs of Subpart DD would be exorbitant in relation to benefits, possibly adversely impacting those populations from an economic standpoint.

Specifically, we recommend that the proposed "grain unloading station" definition be modified to read in final form as follows:

> *Grain unloading station* means that portion of a grain elevator where the grain is transferred from a truck, railcar, barge, ship or receiving hopper to the grain handling equipment that connects the unloading station to the rest of the grain elevator. A grain unloading station includes all of the equipment, support structures, and associated dust control equipment and aspiration systems connected to or required to operate the grain unloading station.

2. TSF-Dedicated Unloading Stations

The Coalition also urges EPA, through language change or interpretative clarification, to exclude from the definition of "grain unloading station" any unloading station that is dedicated solely to a TSF or TSFs. The reasons are as follows:

Given the all-inclusive nature of the proposed revisionary language, the revised definition in Subpart DD of "grain unloading station" could be seen as relating not only to permanent storage, but also TSFs, with the result that a TSF-dedicated unloading station might be treated as an "affected facility" retrospectively. However, such stations should not be classified as "affected facilities" in Subpart DD. First, as the Coalition established through its 2010 *Petition for Rescission* (see n.8 *supra*), EPA did not intend when it promulgated Subpart DD in 1978 to subject TSFs to that NSPS.[15] In addition, nearly all TSFs experience only one turnover per year, as opposed to the much greater number of annual turnovers that are typical of permanent capacity. *See Petition for Rescission*, at 8. TSFs, and their supporting equipment, are so different in structure, function, air quality significance and control cost-effectiveness from permanent storage that they warrant radically different treatment in an NSPS.

As the Coalition demonstrated in its *Petition for Rescission* on the basis of EPA's §114 database, an average bushel of permanent storage is equivalent to about 10 bushels of temporary storage *on an uncontrolled emissions basis*. In other words, on average, one bushel of permanent storage results in nine times the annual emissions of a bushel of temporary storage (when compared on an uncontrolled-emissions basis). Therefore, temporary storage and permanent storage are not equivalent when compared on a bushel-of-capacity basis, especially when the cost-effectiveness of control (fabric filters) are taken into account. Temporary storage simply is not as significant (in terms of emissions) , therefore, the Coalition believes that on the basis of the Subpart DD rulemaking record and the §114 database, TSF capacity clearly is not the same as permanent storage capacity. Indeed, because of the differences in annual throughput, the cost-effectiveness (annualized dollars per ton of PM reduced) of fabric filter control for a TSF-

[15] According to the U.S. Supreme Court, the proper method for determining the meaning of an agency's regulations is to examine first the plain language of the regulation and then any "other indications of the [agency's] intent *at the time of the regulation's promulgation.*" *Thomas Jefferson University v. Shalala*, 512 U.S. 504, 512 (1994). *See also Gardebring v. Jenkins*, 485 U.S. 415, 430 (1988).

dedicated unloading station would be much greater than the cost-effectiveness of such control for an unloading station dedicated to permanent storage.

Therefore, treating an unloading station that is dedicated solely to a TSF as an "affected facility" would not be "appropriate" within the meaning of section 111(b)(1) of the CAA. It would also exceed EPA's authority because the CAA does not contain any authorization to apply NSPS requirements retrospectively. EPA should clarify that it has no intention to apply Subpart DD to an unloading station dedicated solely to a TSF.

B. EPA's Conclusion That Subpart DD Does Not Apply to Wire-Screen Grain Dryers and *En Masse* Barge Unloading Technology

The Coalition strongly agrees with EPA's conclusion in the instant proposal that Subpart DD never applied to wire-screen grain dryers and *en masse* barge unloading technology. (For EPA's conclusion, see, e.g., 79 Fed. Reg. at 39246 col. 2.) Justification for that conclusion lies in two papers that the Coalition submitted to EPA in 2010, namely: (1) *Applicability of and Alternatives to the Current NSPS Subpart DD Barge Unloading Standard* (June 28, 2010), and (2) *Column Grain Dryers Using Woven-Wire Screens as the Column Walls* (June 15, 2010). Those papers are attached as Attachments B and C. and hereby incorporated by reference.

C. EPA's Exclusion of TSFs from the Definition of "Permanent Storage Capacity" in Subpart DD

In its November 21, 2007 letter to the National Grain and Feed Association, EPA-OECA specifically stated that it considers certain classes of temporary storage to be permanent storage based merely upon the *Webster's Dictionary* definition of "bin." EPA's letter also stated that the agency "intends to proceed with a notice-and comment rulemaking…to clarify the issue," while noting that the letter "is not a site-specific applicability determination and does not represent final agency action."

As detailed in its 2010 *Petition for Rescission*, the Coalition believed that opinion to be fatally flawed. EPA promulgated Subpart DD in 1978, and formally reviewed it in 1984 without making any change. It was only subsequently that TSFs emerged as a new form of grain storage. Thus, the EPA could not have had a specific intent to regulate TSFs by means of Subpart DD. In addition, it had never performed the substantive BSER analysis for TSFs and their loading and unloading facilities, nor given the advance notice and opportunity for comment, as required by the CAA.

As noted in the instant proposal (79 Fed. Reg. at 39253 col. 2), EPA in July 2014 rescinded the 2007 opinion letter, noting in part that it is "now aware that (temporary storage facilities) typically handle the grain less time throughout the year than other types of permanent storage facilities, and may require different treatment."

While the Coalition appreciates EPA's action in response to its 2010 *Petition for Rescission*, it believes that the July 2014 rescission is outside the purview of the instant

rulemaking and, in any event, is fully supported by the *Petition*, which is already part of the e-docket for this rulemaking (see footnote 8 *supra*) and hereby incorporated by reference.

D. Proposed Definitions and Standards in Subpart DD for Barge and Ship Unloading

Under Subpart DD, EPA proposes to "clarify" section 302(d)(1) – the technology-based standard for barge and ship unloading – by adding the following statement: "Where aspiration of the casing provides dust control at the *boot of the conveyor* and a receiving hopper is not used, the unloading leg must be enclosed from the top to the center line of the bottom pulley and ventilation to a control device must be maintained on both sides of the leg." 79 Fed, Reg. at 39263 col. 2 (emphasis added). EPA explained: "Current § 60.302(d)(1) requires that the unloading leg be enclosed from the top, *including the receiving hopper,* to the center line of the bottom pulley. However, not all barge and ship unloading stations currently use a hopper. More recently, new technologies have been developed such that a hopper is not required." *Id.* at 39258 cols. 2-3 (emphasis added).

The Coalition understands EPA's explanation to be referring to the distinction between a vertical marine leg (*i.e.,* the unloading leg), which brings the grain out of the barge or ship, and a horizontal conveyor, which receives the grain directly from the vertical marine leg, without the intermediate use of a receiving hopper. Within the industry, the term "boot" is commonly understood to refer to the bottom of a vertical marine leg (*i.e.,* the unloading leg). In contrast, the term "tail" is commonly understood to refer to the receiving end of a horizontal conveyor. Thus, in barge/ship unloading, the unloading leg (*i.e.,* the vertical marine leg) in some applications discharges directly onto the "tail" of a horizontal conveyor.

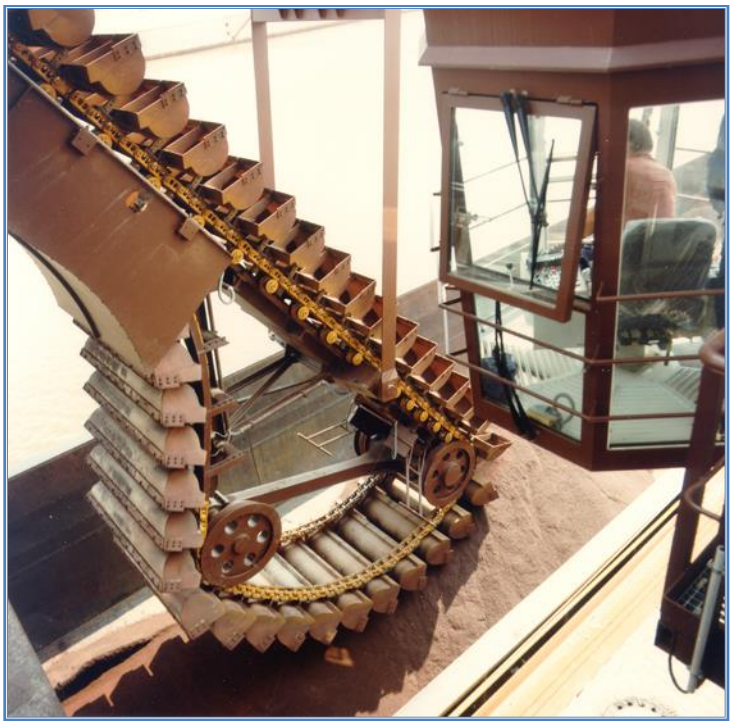
EPA contends that the addition of that statement is merely a clarification of EPA's original intent in 1978. *See* 79 Fed. Reg. at 39244 col. 1, 39247 col. 3, and 39257 col. 3. It therefore proposes to apply the clarification "retrospectively". 79 Fed. Reg. at 39248 col. 3.

The Coalition disagrees with EPA's premise. The text of current Subpart DD clearly shows that EPA in 1978 had in mind only the combination of vertical marine leg and receiving hopper. Indeed, EPA acknowledges as much in its explanation (see quote above) when it refers to certain "new technologies", apparently including the combination of vertical marine leg and horizontal conveyor (without benefit of receiving hopper). EPA cannot say, therefore, that it intended to regulate the latter by means of the still-extant, 1978 version of Subpart DD. Consequently, the proposed clarification is actually an attempt to impose a new requirement, one that EPA may not apply retrospectively. The Coalition asks that EPA affirm that Subpart DD never governed the marine leg/horizontal conveyor combination and delete the clarification.

However, in the event EPA decides to retain the clarification, the Coalition urges EPA to refine it. The use of the phrase "boot of the conveyor" in this context is confusing, because it could refer to either the vertical marine leg (the unloading leg) or the horizontal conveyor. EPA obviously intends by its proposal only to focus on the former. Therefore, it would be clearer and fully accurate to use the phrase "boot of the unloading leg."

Similar treatment is warranted for continuous barge unloaders (CBUs), which by necessity must discharge onto a separate conveyor because they move vertically with the river stage and horizontally across the width of a barge.

The boom of a CBU can be raised or lowered so as to be placed into a barge at different angles. This is what allows the CBU to unload barges at very different river stages. To achieve this effect, however, CBUs do not have a true "bottom pulley." Instead, CBUs have a set of lower pulleys that maintain tension on the belt and allow the buckets to make proper contact with the grain at different boom angles as illustrated in the figure below (Figure 1).



[Figure 1]

As a result, it is technically infeasible for a CBU to be totally enclosed from the top "to the center line of the bottom pulley."

For that reason, and because CBUs were not used in the U.S. grain industry before 1978, it is obvious that EPA did not have CBUs in mind when it promulgated Subpart DD originally and, therefore, had no intent to apply the requirements of section 60.302(d) to them. Consequently, the Coalition requests that EPA complement the clarification to section 302(d)(1) proposed by the Coalition above with a clarification to the current definition of "unloading leg" in section 301(o), as follows: "Unloading leg refers to a device which includes a bucket-type elevator which is used to remove grain from a barge or ship, <u>but does not include continuous barge unloaders without a single bottom pulley.</u>" As discussed above, section 302(d)(1) governed *only* the combination of a vertical marine leg and receiving hopper, not CBUs, and EPA lacks authority to impose requirements retrospectively.

The Coalition asks, in the event EPA finalizes any amendments to the provisions of Subpart DD relating to barge or ship unloading, that the Agency explicitly clarify at least in the preamble to the final action that any increase in the stringency of Subpart DD that might be occasioned by those amendments is of no effect. For instance, EPA should clarify that it does not intend to bring within the ambit of Subpart DD either (i) any marine leg/horizontal conveyor combination or (2) any CBU, neither of which were previously subject to Subpart DD. EPA further should state that it does not intend by clarifying the equipment-related requirements for barge/ship unloading to increase their stringency. EPA lacks any authority to increase the coverage and stringency of Subpart DD as it applies to construction, modification or reconstruction of grain elevators between 1978 and July 2014 – that is, retroactively, to past events. Under the landmark U.S. Supreme Court decision in *Landgraf v. USI Film Products,* 511 U.S. 244, 280 (1994), federal courts, including the U.S. Court of Appeals for the District of Columbia Circuit, *i.e.*, the reviewing court for nationally-applicable final actions under the CAA, such as an NSPS, will strike down an attempt by a federal agency to apply a particular statute retroactively, unless the statute clearly authorizes such retroactive application. *See, e.g., Quantum Entertainment Ltd. v. USDOI,* 714 F.3d 1338 (D.C. Cir. 2013), *cert. denied* 134 S. Ct. 1787 (2014). Here, the CAA contains no such clear authorization, whether express or implied.

E. Treatment in Subpart DD of Startups, Shutdowns and Malfunctions

All indications in the instant rulemaking proposal are that EPA plans to continue, pursuant to 40 CFR 60.8(c), to exclude from determinations of compliance with Subpart DD (as opposed to Subpart DDa) those excess emissions resulting from startups, shutdowns and malfunctions (SSM), as defined at 40 CFR 60.2. The text of the proposed amendments to Subpart DD nowhere addresses 40 CFR 60.8(c). *See* 79 Fed. Reg. at 39263. Moreover, the preamble to the proposal affirmatively indicates that intent. *See id.* at 39243-44, 39246 cols. 1-2 ("Neither the proposed standards nor the clarifications to the existing standards are changing the rules for *currently affected facilities* …." (Emphasis added.)); 39256 col. 2 (bottom); and 39259 col. 1 ("The proposed subpart DDa rule eliminates the startup, shutdown and malfunction exemptions.").

The Coalition strongly agrees with that plan. EPA would lack authority to eliminate the exemption retroactively, as discussed above. The Coalition asks that EPA in the final action package confirm that it is not seeking to eliminate the exemption retroactively.

V. COMMENTS ON PROPOSED SUBPART DDa

The Coalition has focused its attention most particularly on proposed Subpart DDa, which applies to new, modified or reconstructed grainelevator "affected facilities" prospectively from July 9, 2014. As detailed below, the Coalition respectfully requests many significant changes from the proposal.

However, the Coalition wishes first to comment on EPA's analysis of the incremental costs and benefits of Subpart DDa, as applicable to future events. Whether one looks to EPA's analysis or the Coalition's corrections to that analysis, it is clear that those incremental costs, especially those related to the treatment of TSFs, are "exorbitant" in relation to the benefits and

therefore unlawful. *Essex Chemical Corp. v. Ruckelshaus*, 486 F.2d 427, 433 (1973). Consequently, seen at a macro-level, the new features of grain elevator regulation embodied in Subpart DDa are entirely outside EPA's scope of authority as granted by section 111(b) of the CAA. The Coalition urges EPA to abandon those features or at least to mitigate their stringency substantially, assuming the Agency is able to demonstrate that grain elevators are "significant" on a going-forward basis.

A. EPA'S Analysis of the Incremental Regulatory Impact of Proposed NSPS Subpart DDa

EPA declared the instant NSPS rulemaking for the grain elevator industry to be economically insignificant for purposes of E.O. 12866. Therefore, the supporting documents for the rulemaking do not include a formal Regulatory Impact Analysis (RIA). Although a RIA was not performed by EPA, the *Impact Analysis* and *2014 ICR Supporting Statement* provide estimated costs and benefits.

In the *Impact Analysis*, EPA estimates that 123 grain elevators[16] would become subject to Subpart DDa during the initial five years of the regulation and that the incremental annual cost of compliance would be $1,116,017. The estimated incremental PM10 emission reduction would be 31 tons per year (tpy). Those values are incremental in the sense that they characterize the impact of the proposed requirements of Subpart DDa that would be additional to the requirements of current Subpart DD.

The Coalition estimates as a very conservative *upper bound* that 33 grain elevators at most would become subject to Subpart DDa during the first 5 years. The Coalition's grain elevator estimate is lower because it disagrees with EPA's assumption that 90 grain elevators would be modified or reconstructed in a manner that would cause them to become subject to Subpart DDa. Despite the Coalition's much smaller estimate of 33 impacted grain elevators relative to EPA's estimate of 123 impacted grain elevators, the Coalition's annual cost of compliance exceeds EPA's. The Coalition's estimate of incremental annual cost is $1,586,418 and includes additional expense for 3-sided shed enclosures and fabric filters and costs that were omitted in EPA's *Impact Analysis*, such as fabric filter installation, training, recordkeeping and reporting.

The Coalition did not estimate incremental PM10 emission reductions, but agrees with the scenarios that EPA provides as the sources of the 31 tpy of incremental emission reductions. All of the sources of the 31 tpy of PM10 emission reduction that EPA provided are contained in the scenarios that yielded the Coalition's estimate of 33 impacted grain elevators.

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[16] EPA inexplicably projects in Sections VI.A. and VIII.D. of the preamble that 88 grain elevators would become subject to Subpart DDa during the first 5 years. This caused confusion for the Coalition because the costs in the preamble for the 88 grain elevators are a direct reflection of the costs from the *Impact Analysis*, which was based on 123 grain elevators. For the purpose of its comments, the Coalition used EPA's projection of 123 grain elevators and the corresponding scenarios from the *Impact Analysis*. Either way the costs are "exorbitant" in relation to benefits. *Essex Chemical*, 486 F.2d at 433.

For EPA, the annual cost per ton of PM10 emission reduction provided by proposed Subpart DDa is $36,001 ($1,116,017 / 31 tpy). If the Coalition assumes 31 tpy of PM10 emission reduction is correct, then the Coalition estimates the annual cost per ton is $51,175 ($1,586,418 / 31 tpy).

EPA's estimated annual incremental cost per grain elevator that will become subject to Subpart DDa over the first five years is $9,073 per year ($1,116,017 / 123 grain elevators), whereas, the Coalition's estimated annual incremental cost per grain elevator is much larger: $48,073 per year ($1,586,418 / 33 grain elevators).

Based on the high cost of the proposed control technologies and compliance assurance mechanisms relative to the small amount of PM10 reduction that would be achieved, the Coalition strongly urges EPA to reconsider the appropriateness of the proposed added requirements that would be embodied in Subpart DDa. Their cost is "exorbitant" in relation to benefits. *Essex Chemical*, 486 F.2d at 433. To put those added requirements into final effect would be in excess of EPA's authority under section 111(b) of the CAA, as well asarbitrary and capricious. To put the elements of those requirements that increase paperwork burdens (*e.g.,* the new compliance assurance measures) would violate the PRA's requirements calling for necessity, practical utility and burden minimization, as detailed above.

1. Projected Cost for Grain Elevators Subject to Subpart DDa

In EPA's *Impact Analysis*, 123 grain elevators are projected to become subject to Subpart DDa within the first five years – See Table 1 below. EPA identified all of the scenarios that could cause grain elevators to become subject to Subpart DDa and projected the number of grain elevators for each scenario. The Coalition does not disagree with EPA's projections for the number of grain elevators that will become subject to Subpart DDa within five years for scenarios 6a, 6b, 7, 8, 9 and 10 as conservative (upper bound) guesses, but the actual numbers are likely to be much smaller, in the Coalition's view, as discussed previously.

The Coalition strongly disagrees with the assumption EPA used for scenario 11 that at least 5 percent of the estimated population of grain elevators (90 grain elevators over five years) that are currently subject to Subpart DD would be modified or reconstructed and become subject to Subpart DDa. The Coalition believes in practice almost all grain elevators that are modified or reconstructed will be done so in a manner that does not increase PM10 emissions and thus will not become subject to Subpart DDa. As a result, the Coalition projects as a conservative upper bound that only the 33 (123-90) grain elevators from scenarios 6a, 6b, 7, 8, 9 and 10 will become subject to Subpart DDa over the first five years.

Table 1. EPA and *Coalition*. Projected Number of Grain Elevators In Each Scenario Subject to Proposed Subpart DDa Requirements (that are different than subpart DD requirements) By Year Following Proposal

Scenario	Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
6a	Greenfield GE w/capacity > DDa cutoffs due only to permanent storage capacity	1			1		2
6b	Greenfield GE w/capacity > DDa cutoffs due to adding TSF capacity			1			1
7	Existing GE w/capacity < DDa cutoffs, but then adds TSF capacity and exceeds cutoffs	1	1	1	1	1	5
8	Existing GE w/capacity < DDa cutoffs, but then adds permanent storage capacity and	1	1	1	1	1	5
9	Existing GE w/capacity > DDa cutoffs, but then adds permanent storage capacity	2	2	2	2	2	10
10	Existing GE w/capacity > DDa cutoffs, but then adds TSF capacity	2	2	2	2	2	10
11	Existing GE w/capacity > DDa cutoffs, and does modification or reconstruction	18	18	18	18	18	90
11 Coalition	*Existing GE w/capacity > DDa cutoffs, and does modification or reconstruction*	*0*	*0*	*0*	*0*	*0*	*0*
EPA Total		25	24	25	25	24	123
Coalition Total		*7*	*6*	*7*	*7*	*6*	*33*

In EPA's *Impact Analysis*, the emission reductions for the first five years are estimated for each scenario that would cause grain elevators to become subject to Subpart DDa. EPA estimates the total incremental PM10 emission reduction will be 31 tpy and all of the PM10 emission reduction is from scenarios 6b, 7 and 10. The Coalition does not disagree with EPA's estimate. – See the immediately following Table 2 (EPA. Summary of PM10 Emission Reductions).

Table 2. EPA. Summary of PM10 Emission Reduction (tons per year) for Projected Grain Elevators In Each Scenario Subject to Proposed Subpart DDa Requirements (that are different than subpart DD requirements) In the Fifith Year Following Proposal

Scenario	Description	PM10 Emission Reduction (tpy)
6b	Greenfield GE w/capacity > DDa cutoffs due to adding TSF capacity	17
7	Existing GE w/capacity < DDa cutoffs, but then adds TSF capacity and exceeds cutoffs	6.9
10	Existing GE w/capacity > DDa cutoffs, but then adds TSF capacity	6.9
6a, 8, 9, 11		0.0
EPA Total		31

In EPA's *Impact Analysis*, the incremental capital costs for the first five years are estimated for each scenario and total $1,087,400. – See the immediately following Table 3 (EPA. Summary of Capital Costs). The Coalition estimates the incremental capital costs for the first five years will total $2,346,285 – See Table 4 (Coalition. Summary of Capital Costs). The

reason for the difference in capital cost estimates is that the Coalition believes EPA based its estimate on inadequate three-sided sheds and fabric filters and omitted fabric filter equipment and installation costs.

EPA based its three-sided shed cost estimate of $33,200 on a shed that is 8 feet in width, 45 feet in length and 20 feet in height. However, most grain trucks are 8.5 feet wide and would not be able to enter an 8 feet wide shed. In addition, there would be no room for a load out operator to open and close grain hoppers. Moreover, 56 feet long straight trucks that are unloading would hit the top of a shed that is only 20 feet tall.

The Coalition contacted a contractor that erects sheds over receiving pits and was told that a shed with the ability to unload straight trucks would need to be 34 feet in height. The contractor recently erected a three-sided shed over a receiving pit and charged $91,000 for the materials and installation. The dimension of the shed was 20 feet in width, 40 feet in length and 34 feet in height.

Further, EPA estimated that a National Electrical Manufacturers Association (NEMA) type 4 fabric filter at a cost of $51,000 would be used to comply with NSPS. It is the experience of Coalition member companies that a NEMA type 9 fabric filter add-on will be required to meet the NSPS opacity standard. A NEMA type 9 add-on will cost $4,627 according to Schenck Process, LLC, the company that provided the NEMA type 4 cost estimate for EPA's analysis. Thus, the total purchase cost of the fabric filer and NEMA type 9 add-on will be $55,627.

In its capital cost estimate for fabric filters, EPA did not include the following purchased equipment costs: instrumentation, sales tax and freight, nor did it include the following installation costs: foundations and supports, handling and erection, electrical, piping, insulation for ductwork, painting, engineering, construction and field expense, contractor fees, start-up, and contingencies.

According to Table 1.9 of Section 6 of EPA'sControl Cost Manual[17], the purchased equipment cost factor for fabric filters is 1.18 and the installation cost factor is 2.18 (the installation cost factor <u>excludes</u> the performance test cost factor of 0.01 for a performance test because it is included in the cost of the Method 5 test). Applying the purchased equipment cost factor of 1.18 and the installation cost factor of 2.18 to the estimated fabric filter purchase price of $55,627 equals a total capital cost of $143,095 per fabric filter.

[17] *EPA Air Pollution Control Cost Manual, Sixth Edition*, EPA/452/B-02-001, January 2002

Table 3. EPA. Summary of Capital Costs for Projected Grain Elevators In Each Scenario Subject to Proposed Subpart DDa Requirements (that are different than subpart DD requirements) In the Fifith Year Following Proposal

Scenario	Description	3-sided Shed 1/		Dryer 2/		Fabric Filter 3/		Total
6b	Greenfield GE w/capacity > DDa cutoffs due to adding TSF capacity	2	$66,400	1	$370,000	3	$153,000	$589,400
7	Existing GE w/capacity < DDa cutoffs, but then adds TSF capacity and exceeds cutoffs	5	$166,000	0	$0	0	$0	$166,000
10	Existing GE w/capacity > DDa cutoffs, but then adds TSF capacity	10	$332,000	0	$0	0	$0	$332,000
6a, 8, 9, 11		NA	NA	NA	NA	NA	NA	NA
EPA Total		17	$564,400	1	$370,000	3	$153,000	$1,087,400

1/ Each 3-sided shed that is 20 feet high x 45 feet long x 8 feet wide capital cost = $33,200

2/ Each dryer screen capital cost = $370,000 (Response from Rice Manufacturer for rice screens)

3/ Each National Electrical Manufacturers Association type 4 fabric filter capital cost = $51,000

Table 4. *Coalition.* Summary of Capital Costs for Projected Grain Elevators In Each Scenario Subject to Proposed Subpart DDa Requirements (that are different than subpart DD requirements) In the Fifith Year Following Proposal

Scenario	Description	3-sided Shed 1/		Dryer 2/		Fabric Filter 3/		Total
6b	Greenfield GE w/capacity > DDa cutoffs due to adding TSF capacity	2	$182,000	1	$370,000	3	$429,285	$981,285
7	Existing GE w/capacity < DDa cutoffs, but then adds TSF capacity and exceeds cutoffs	5	$455,000	0	NA	0	NA	$455,000
10	Existing GE w/capacity > DDa cutoffs, but then adds TSF capacity	10	$910,000	0	NA	0	NA	$910,000
6a, 8, 9, 11		NA	NA	NA	NA	NA	NA	NA
Coalition Total		17	*$1,547,000*	1	*$370,000*	3	*$429,285*	*$2,346,285*

1/ Each 3-sided shed that is 34 feet high x 40 feet long x 20 feet wide to accomodate a 56 feet long straight truck capital cost = $91,000 (installed cost).

2/ Each dryer screen capital cost = $370,000 (Response from Rice Manufacturer for rice screens) (installed cost).

3/ Each National Electrical Manufacturers Association (NEMA) type 4 fabric filter with NEMA type 9 add-on capital cost = $55,627 (purchase price of fabric filter) * 1.18 (instrumentation, sales tax and freight per Table 1.9 Capital Cost Factors for Fabric Filters from Section 6 of EPA Air Pollution Cost Control Manual) * 2.18 (foundation & supports, handling & erection, electrical, piping, insulation for ductwork, painting, engineering, construction & field expense, contractor fees, start-up and contingencies from per Table 1.9 Capital Cost Factors for Fabric Filters from Section 6 of EPA Air Pollution Cost Control Manual) = $143,095.

EPA's *Impact Analysis* estimates the incremental annual costs for the first five years would equal $1,116,017 – See Table 5 (EPA. Summary of Annual Costs). After adjusting the costs for the Coalition's larger three-sided shed and for the NEMA type 9 add-on to the fabric filter and to include costs for fabric filter installation, training, recordkeeping and reporting, as well subtracting the cost of scenario 11, the Coalition arrived at an incremental annual cost of $1,586,418 – See Table 6 (Coalition. Summary of Annual Costs).

The Coalition adopted EPA's assumptions on the amount of PM testing, semi-annual fabric filter inspections, annual opacity testing and weekly visual inspections for all of the scenarios, except scenario 11. As previously stated, the Coalition disagrees with EPA's assumption in scenario 11 that at least 5 percent of grain elevators that are subject to Subpart DD will be modified or reconstructed in a manner that makes them subject to Subpart DDa. The Coalition assumes all grain elevators that undergo a modification or reconstruction will do so in a manner that does not increase PM emissions or opacity. Therefore, the Coalition's estimate of annual cost for scenario 11 is $0, whereas EPA estimates the cost of scenario 11 is $298,123.

A comparison of the EPA and Coalition's incremental annual costs for each three-sided shed, dryer screen and fabric filter can be viewed in Tables 7-9. In addition, the Coalition estimated the costs of training, recordkeeping and reporting are $4,306 per affected facility – See Table 10, which is based on costs included in the *ICR Supporting Statement*. Training, recordkeeping and reporting costs are omitted in EPA's *Impact Analysis*.

In section 60.306a(a), facilities are required to use EPA' s electronic reporting tool to record performance test data. As part of the estimated costs of training, recordkeeping and reporting, the Coalition estimates $295 per year will be spent training personnel to use the complicated electronic reporting tool and entering data into the tool. This cost represents a duplicative and unjustified effort for affected grain elevators, and is not cost effective.

A cost not included in the Coalition's analysis, but worth mentioning, is the burden the states will incur by having to manage and enforce an expanded regulation. The Coalition urges EPA to take into consideration both the costs to the regulated industry and the costs to the regulating parties.

Table 5. EPA. Summary of Annual Costs for Projected Grain Elevators In Each Scenario Subject to Proposed Subpart DDa Requirements (that are different than subpart DD requirements) In the Fifth Year Following Proposal

Scenario	Description	PM Testing (initial/every 5 years) 1/	Semi Annual FF Inspection 2/	Annual Opacity Test (Method 9) 3/	Weekly Visual Inspection 4/	3-sided Shed 5/	Dryer Screens 6/	Fabric Filter 7/	Total
6a	Greenfield GE w/capacity > DDa cutoffs due only to permanent storage capacity	NA	$414	$55,879	$9,867	NA	NA	NA	$66,160
6b	Greenfield GE w/capacity > DDa cutoffs due to adding TSF capacity	$36,576	$207	$27,940	$4,934	$24,773	$78,986	$60,531	$233,947
7	Existing GE w/capacity < DDa cutoffs, but then adds TSF capacity and exceeds cutoffs	$60,959	$345	$38,100	$6,728	$61,931	NA	NA	$168,063
8	Existing GE w/capacity < DDa cutoffs, but then adds permanent storage capacity and exceeds cutoffs	NA	$345	$38,100	$6,728	NA	NA	NA	$45,173
9	Existing GE w/capacity > DDa cutoffs, but then adds permanent storage capacity	NA	$690	$76,199	$13,455	NA	NA	NA	$90,344
10	Existing GE w/capacity > DDa cutoffs, but then adds TSF capacity	NA	$690	$76,199	$13,455	$123,863	NA	NA	$214,207
11	Existing GE w/capacity > DDa cutoffs, and does modification or reconstruction	NA	$5,253	$248,917	$43,953	NA	NA	NA	$298,123
EPA Total		$97,535	$7,944	$561,334	$99,120	$210,567	$78,986	$60,531	$1,116,017

1/ Each method 5 test = $12,192
2/ Each semi annual fabric filter inspection cost = $34
3/ Each method 9 test = $2,540
4/ Each weekly visual inpection cost = $8.63
5/ Annualized cost of each 3-sided shed = $12,386. See Table 7.
6/ Annualized cost of each dryer screen = $78,986. See Table 8.
7/ Annualzied cost of each fabric filter = $20,177. See Table 9.

Table 6. *Coalition.* Summary of Annual Costs for Projected Grain Elevators In Each Scenario Subject to Proposed Subpart DDa Requirements (that are different than subpart DD requirements) In the Fifth Year Following Proposal

Scenario	Description	PM Testing (initial/every 5 years) 1/	Semi Annual FF Inspection 2/	Annual Opacity Test (Method 9) 3/	Weekly Visual Inspection 4/	3-sided Shed 5/	Dryer Screens 6/	Fabric Filter 7/	Training, Records & Reporting 8/	Total
6a	Greenfield GE w/capacity > DDa cutoffs due only to permanent storage capacity	NA	$414	$55,879	$9,867	NA	NA	NA	$94,730	$160,890
6b	Greenfield GE w/capacity > DDa cutoffs due to adding TSF capacity	$36,576	$207	$27,940	$4,934	$35,334	$78,986	$209,646	$47,366	$440,990
7	Existing GE w/capacity < DDa cutoffs, but then adds TSF capacity and exceeds cutoffs	$60,959	$345	$38,100	$6,728	$88,336	NA	NA	$64,590	$259,058
8	Existing GE w/capacity < DDa cutoffs, but then adds permanent storage capacity and exceeds cutoffs	NA	$345	$38,100	$6,728	NA	NA	NA	$64,590	$109,763
9	Existing GE w/capacity > DDa cutoffs, but then adds permanent storage capacity	NA	$690	$76,199	$13,455	NA	NA	NA	$129,178	$219,522
10	Existing GE w/capacity > DDa cutoffs, but then adds TSF capacity	NA	$690	$76,199	$13,455	$176,672	NA	NA	$129,178	$396,194
11	Existing GE w/capacity > DDa cutoffs, and does modification or reconstruction	NA	NA	NA	NA	NA	NA	NA	NA	$0
Coalition Total		*$97,535*	*$2,691*	*$312,417*	*$55,167*	*$300,342*	*$78,986*	*$209,646*	*$529,634*	*$1,586,418*

1/ Each method 5 test = $12,192
2/ Each semi annual fabric filter inspection cost = $34
3/ Each method 9 test = $2,540
4/ Each weekly visual inpection cost = $8.63
5/ Annualized cost of each 3-sided shed = $17,667. See Table 7.
6/ Annualized cost of each dryer screen = $78,986. See Table 8.
7/ Annualzied cost of each fabric filter = $69,882. See Table 9.
8/ Training, recordkeeping and reporting cost for each affected facility = $4,306. See Table 10.

Table 7. EPA and *Coalition.* Annualized Cost for Each 3-sided Shed

Annual cost = indirect + direct costs

Item	EPA	*Coalition*	Explanation
Purchase Cost	$33,200	$91,000	Coalition purchase price from contractor
Annual Cost	$12,386	$17,667	
Direct costs = maintenance and maintenance labor			
Direct costs	$3,398	$3,398	
Mainenance labor	$1,699	$1,699	Calculated based on:
Performed	1	1	time a month
Hours	4	4	hours an event
Labor cost	$35.40	$35.40	$/hr
Mainenance materials	$1,699	$1,699	Based on OAQPS Cost Manual
Indirect Costs = overhead, adminstrative, property tax, insurance, capital recovery			
Indirect Costs	$8,988	$14,269	
Admin, tax, ins.	$3,815	$3,640	EPA's estimate is from EPA's ACA tool. Coalition's estimate is 4% of capital cost
Overhead	$2,039	$2,039	60% of maintenance labor+materials, from OCCM
Capital Recovery	$3,134	$8,590	Calculated by multiplying shed costs and CRF
Capital Recovery Factor	0.0943929	0.0943929	
Interest rate	7%	7%	
lifetime	20	20	Years

Table 8. EPA and *Coalition.* Annualized Cost for Each Dryer Screen

Annual cost = indirect + direct costs

Item	EPA	*Coalition*	Explanation
Purchase Cost	$370,000	$370,000	
Annual Cost	$78,986	$78,986	
Direct costs = maintenance and maintenance labor			
Direct costs	$14,726	$14,726	
Maintenance labor	$7,363	$7,363	Calculated based on:
Performed	52	52	times a year
Hours	4	4	hours an event
Labor cost	$35.40	$35.40	$/hr
Maintenance materials	$7,363	$7,363	Based on OAQPS Cost Manual
Indirect Costs = overhead, adminstrative, property tax, insurance, capital recovery			
Indirect Costs	$64,260	$64,260	
Admin, tax, ins.	$14,800	$14,800	4% of capital cost, from OCCM
Overhead	$8,836	$8,836	60% of maintenance labor+materials, from OCCM
Capital Recovery	$40,624	$40,624	Calculated by multiplying screen costs and CRF
Capital Recovery Factor	0.1097946	0.1097946	
Interest rate	7%	7%	
Lifetime	15	15	Years

Table 9. EPA and *Coalition.* Annualized Cost for Each Fabric Filter/Dust Collector

Annual cost = capital recovery + indirect + direct costs

Item	EPA	*Coalition*	Explanation
Purchase Cost	$51,000	$143,095	Coalition applied purchase & installation cost factors from table 1.9 of section 6 of EPA's control cost manual
Annual Cost	$20,177	$69,882	
Direct costs = Maintenance, electricty for fan, dust disposal			
Direct Costs	$10,498	$32,942	
Electicity for fan	$5,000	$5,000	Based on OAQPS Cost Manual
Maintenance labor	$1,699	$12,921	Based on OAQPS Cost Manual
Performed	1	1	times/month for EPA and times/day for Coalition
Hours	4	1	hour an event
Labor cost	$35.40	$35.40	$/hr
Maintenance materials	$1,699	$12,921	Based on OAQPS Cost Manual
Dust disposal	$2,100	$2,100	Based on $42.14/ton from Boiler NESHAP and ratio of 3:1 PM to PM10
Indirect Costs = overhead, adminstrative, property tax, insurance, capital recovery			
Indirect Costs	$9,679	$36,940	
Admin, tax, ins.	$2,040	$5,724	4% of capital cost, from OCCM
Overhead	$2,039	$15,505	60% of maintenance labor+materials, from OCCM
Capital Recovery	$5,600	$15,711.06	Calculated by multiplying FF costs and CRF
Capital Recovery Factor	0.1097946	0.1097946	
Interest rate	7%	7%	
Lifetime	15	15	Years

Table 10: *Coalition.* Summary of Annual Training, Recordkeeping, Reporting Costs for Each Affected Facility at Projected Grain Elevators Subject to Proposed Subpart DDa Requirements (that are different than subpart DD requirements) Following Proposal 1/	
Item	Annual Cost per Affected Facility
Records of grain storage capacity and annual throughput	$1,474
Records of operational change	$184
Records of initial/every 60 months PM test results	$147
Records of initial/annual opacity test results	$74
Records of weekly visual emission inspections	$326
Records of baghouse and fabric filter inspections every 6 months	$37
Records of when an affected source failed to meet the standard	$184
Reporting of construction or modification application	$37
Reporting of construction/reconstruction	$37
Reporting of initial/every 60 months PM test results	$184
Reporting of initial/annual opacity test results	$184
Reporting of actual startup	$37
Reporting of physical or operational change	$184
Reporting of malfunction report	$184
Training personnel to perform weekly visual emission inspections, inspections of baghouse and fabric filter inspections every 6 months, annual opacity tests, PM tests every 60 months	$184
Training personnel to write and record weekly visual emission inspections, inspections of baghouse and fabric filter inspections every 6 months, annual opacity tests, PM tests every 60 months	$184
Training personnel to transmit notifications of weekly visual emission inspections, inspections of baghouse and fabric filter inspections every 6 months, annual opacity tests, PM tests every 60 months	$184
Reading and understanding rule requirements of weekly visual emission inspections, inspections of baghouse and fabric filter inspections every 6 months, annual opacity tests, PM tests every 60 months	$184
Training personnel to use electronic reporting tool and entering data in the tool	$295
Coalition Total	*$4,306*

1/ Based on the January 2014 NSPS Subpart DDa supporting statement on recordkeeping and reporting requirements.

Table 11 compares the estimated annual cost per ton of incremental PM10 emission reduction for EPA and the Coalition, as well as the estimated annual cost of Subpart DDa per impacted grain elevator. EPA's annual incremental cost per ton of PM10 reduction is $36,001 and the Coalition's is $51,175. EPA's annual cost of Subpart DDa per impacted grain elevator is $9,073, whereas the Coalition's estimated annual cost is $48,073 per impacted grain elevator.

Table 11: EPA and *Coalition.* Comparison of Estimated Annual Cost per Ton of PM10 Emission Reduction and Estimated Annual Cost per Impacted Grain Elevator

Projection	Total Annual Cost	PM10 Reduction (tpy)	Annual Cost per Ton of PM10 Reduction	Number of Grain Elevators subject to Subpart DDa	Annual Cost of Subpart DDa per Subject Grain Elevator
EPA	$1,116,017	31	$36,001	123	$9,073
Coalition	*$1,586,418*	*31*	*$51,175*	*33*	*$48,073*

2. Summary

In its review of EPA's *Impact Analysis*, the Coalition determined that EPA based its cost estimates on inadequate three-sided sheds and fabric filters and EPA omitted the costs for fabric

filter equipment installation, training, recordkeeping and reporting. EPA's model three-sided shed is neither wide enough to allow entry of a truck nor tall enough to allow a 56 feet long straight truck to dump. Also, it is the experience of Coalition member companies that a NEMA type 9 fabric filter add-on will be required to meet the NSPS opacity standard.

EPA's incremental annual cost of compliance for Subpart DDa for the first five years is $1,116,017 and the Coalition's is $1,586,418. The estimated incremental annual cost per ton of PM10 emission reduction for EPA is $36,001 and for the Coalition it is $51,175.

The Coalition's incremental annual cost per ton of PM10 is higher than EPA's despite the Coalition estimating a zero cost for scenario 11 (whereas EPA estimated an annual cost of $298,123 for scenario 11). The Coalition's zero cost for scenario 11 is because the Coalition disagrees with EPA's assumption that 90 grain elevators would be modified or reconstructed in a manner that would cause them to become subject to Subpart DDa. The Coalition believes grain elevator operators in almost all cases will ensure that modifications and reconstructions do not increase emissions. Therefore, the Coalition estimates that 33 grain elevators would become subject to Subpart DDa in the first five years, whereas EPA estimated 123 grain elevators.

Of particular note, the Coalition estimates the incremental cost of Subpart DDa over the first five years for each grain elevator is $48,073 per year, which is significantly higher than EPA's estimated cost of $9,073 per year.

The highly disproportionate incremental cost of the proposed control technologies and compliance assurance mechanisms relative to the small incremental amount of PM10 reduction that would be achieved is "exorbitant" within the meaning of *Essex Chemical*, 486 F.2d at 433. Consequently, the added requirements that EPA proposes to build into Subpart DDa are indefensible for section 111(b) purposes. The Coalition strongly urges EPA to abandon the applicability-related portions as not "appropriate" within the meaning of that section, the emissions control related portions as not reflecting BSER, and the compliance assurance related portions as not reasonable within the meaning of both section 114 of the CAA and the PRA.

B. <u>Definition of "Source" (*i.e.* "Affected Facility") to Which Proposed Subpart DDa Would Apply</u>

1. EPA Should Exclude Grain Storage Elevators from DDa Entirely.

Subpart DD and the proposed Subpart DDa define a grain storage elevator (GSE) as "any grain elevator located at any wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant which has a permanent grain storage capacity of 35,200 m^3 (ca. 1 million bushels)." As a general matter, due to the co-located nature of GSEs, Subpart DD/DDa affected facilities at these types of sources are much more likely than free-standing grain elevators to be subject to the various state-level air quality regulations, including major PSD/NSR BACT, minor NSR BACT, and the many other state-specific rules that limit affected facility operations and emissions. Typically, GSEs are also under the same ownership as the grain processing plant at issue and therefore make, along with such plant, a single "source" for purposes of major PSD/NSR BACT/LAER, minor NSR BACT and the other regulations. Thus, co-located and co-owned, the overall complex (processing plant plus grain elevator), when constructed, modified or reconstructed is much more likely to have sufficiently large emissions

as a single "source" so as to trigger those programs for the grain elevator portion, especially major PSD/NSR BACT/LAER and minor NSR BACT, than a free-standing elevator would. Consequently, the air quality "significance" of GSEs on a going-forward basis is even more dubious than the "significance" of grain elevators generally. GSEs have greater potential for being adequately covered by state-level regulation than free-standing elevators. For that reason, it is not "appropriate" within the meaning of section 111(b) of the CAA to continue to apply a federal grain elevator NSPS to grain storage elevators. Therefore, the Coalition urges EPA to exercise its broad discretion under section 111(b) to revise the proposed Subpart DDa to eliminate grain storage elevators from the applicability criteria.

2. The Applicability Thresholds in Subpart DDa Should Be Increased.

The Coalition urges EPA to increase substantially the applicability thresholds of 2.5 million bushels of permanent capacity in the case of "grain terminal elevators" and 1.0 million bushels in the case of "grain storage elevators," for the reasons set forth below.

As mentioned above, in 1977, Congress added section 111(i) to the CAA forbidding EPA from applying any NSPS for grain elevators to "country elevators" whose storage capacity is less than 2.5 million bushels.

In 1978, when EPA shaped the final version of Subpart DD, it decided to apply that NSPS only to new or modified affected facilities at what the Agency considered to be "large" grain elevators, as opposed to "small" ones. *See* 43 Fed. Reg. 34340, 34241 col. 1, & 34342 col. 1 (Aug. 3, 1978). In EPA's view, "small" grain elevators "are best regulated by state and local regulations." *Id.* at 34342 col. 1. EPA expressly treated as "small" those "grain storage elevators" (*i.e.,* elevators located at certain grain processing facilities) whose storage capacity is less than 1.0 million bushels. *See id.* Conversely, EPA treated "grain storage elevators" whose capacity is greater than 1.0 million bushels as "large" and therefore warranting regulation not only by state/local agencies, but also EPA pursuant to section 111. By selecting a threshold of 2.5 million bushels for "grain terminal elevators" (*i.e.,* stand-alone elevators, roughly speaking), EPA not only conformed to section 111(i), but also implicitly determined that any stand-alone elevator whose capacity is greater than 2.5 million bushels is "large" for purposes of Subpart DD applicability.

The preamble to the final version of Subpart DD further reveals that EPA distinguished between "large" and "small" grain elevators on the basis of the residual threat presented by a "typical" grain elevator to attainment and maintenance of the then extant 24-hour NAAQS for particulate matter (PM) (as opposed to PM10 or PM2.5), after taking into account the reductions in PM emissions required by state/local regulations. At the time, the indicator pollutant for PM was "total suspended particulates" (TSP). EPA stated:

> The promulgated standards will reduce uncontrolled particulate matter [*i.e.,* TSP] emission [*sic*] from new grain elevators by more than 99 percent and will reduce particulate matter emissions by 70 to 90 percent compared to emission limits contained in State or local air pollution regulations. This reduction in emissions will

> result in a significant reduction of ambient air concentration levels of particulate matter in the vicinity of grain elevators. The maximum 24-hour average ambient air particulate matter concentration at a distance of 0.3 kilometer (km) from a typical grain elevator, for instance, will be reduced by 50 to 80 percent below the ambient air concentration that would result from control of emissions to the level of the typical State or local air pollution regulations.

43 Fed. Reg. at 34341 col. 1. The shift in the focus of the above preamble language from reductions in emissions of TSP to ambient concentrations of TSP demonstrates that EPA's central criterion for selecting the boundary between "large" and "small" grain elevators was the residual threat to the 24-hour TSP NAAQS, after taking state/local controls into account. EPA, thus, established as guiding precedent that the factors for selecting Subpart DD's applicability thresholds are: (1) the rate at which grain elevators would emit the indicator pollutant for the extant NAAQS for particulate matter, absent regulatory control; (2) the level of the extant NAAQS for each relevant averaging period; and (3) the degree to which Subpart DD would reduce emissions of the indicator pollutant beyond the reductions required by state/local regulations.

Since 1978, all three of those factors have changed substantially. First, EPA has abandoned TSP as an indicator pollutant and adopted PM10 and PM2.5 instead. This is of central importance because, as clarified by updates of AP-42 over the past 34 years, grain elevators emit PM10 and PM2.5 at rates that are a small fraction of their TSP emission rates. (See the table in the Background section of these comments above.) Second, the levels of the PM10 and PM2.5 NAAQS for each relevant averaging period differ from the corresponding levels of the TSP NAAQS and, indeed, from each other. Finally, over those 36 years, the PM control programs at the state and local levels have strengthened greatly, putting into serious doubt EPA's original belief that Subpart DD would reduce PM by 70-90 percent beyond what state and local regulations would require on their own. In its February 6, 2012 petition for repeal of Subpart DD, the Coalition not only described these changes in detail, but also provided an independent study of state/local regulations demonstrating that Subpart DD "has no practical effect in limiting emissions from grain elevator sources."[18] See Exhibit D to the petition.

The change in the past 36 years in just the first two factors – *i.e.*, indicator-pollutant emission rates and NAAQS levels – calls logically for an upward adjustment in Subpart DD's applicability thresholds. To confirm that reality and determine the size of the increase attributable to just those two factors, the Coalition commissioned RTP Environmental Associates, Inc. (Raleigh, NC) to make the appropriate calculations. The results appear in the table below, which shows a minimum equivalence factor of 350 percent based on the 24-hour PM_{10} NAAQS.

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[18] As noted earlier in these comments, the Coalition study considered state regulations ignored by EPA in its assessment in support of Subpart DDa (*i.e.*, the *Significance Analysis*) and thus reached a different conclusion. The Coalition study is attached to its Petition for Repeal, which is part of the e-docket for the instant rulemaking: EPA-HQ-OAR-2012-0706-0082.

Pollutant	NAAQS (µg/m3)	Average Uncontrolled Emission Factor Particle Size Fraction of Subpart DD Affected Facilities* (wt. % of TSP)	Subpart DD Applicability Threshold Equivalence Factor**
TSP-24	150	100%	100%
TSP-365	75	100%	100%
PM10-24	150	28.6%	350%
PM2.5-24	35	4.8%	490%
PM2.5-365	15	4.8%	420%

* The average for the Subpart DD-affected facilities was determined by computing the unweighted average of the average emission factor for each of the following source types: truck loading; truck unloading; rail loading; rail unloading; ship/barge loading; ship/barge unloading; grain dryers; and grain handling. For those source types with more than one emission factor (*e.g*., truck unloading) an average emission factor was first computed for that source type. Thus, the average particle size distribution attributable to each of the above source types contributes equally to the average value shown in the table.

** The equivalence factor is computed based on the ratio of the NAAQS and the average particle size distribution for Subpart DD affected facilities. For example, for the PM10 24-hour NAAQS, the equivalence factor is calculated as: (PM10-24 NAAQS) ÷ (TSP-24 NAAQS x wt. % PM10) = (150) ÷ (150 x 0.286) = 350%.

Based on these results, the threshold for "grain storage elevators" should be *at least* 3.5 million bushels, and the threshold for "grain terminal elevators" should be *at least* 8.8 million bushels, assuming that EPA is focused on the 24-hour PM10 NAAQS. A focus on PM2.5 NAAQS would result in even greater thresholds. For instance, a continuation of EPA's original focus only on the 24-hour NAAQS would result in thresholds of 4.9 million and 12.3 million bushels, respectively. Finally, it deserves emphasis that, if the increase in the strength of state/local programs were taken into account, as it should be, then the thresholds would have to be even higher – indeed, to the point where repeal clearly would be the only sensible option, as indicated by the Coalition's comments on EPA's current "significance" determinations.

In sum, the record of the 1978 promulgation of Subpart DD established an appropriate and precedential analytical framework for setting the applicability thresholds. That framework, when applied to the substantial changes in relevant circumstances over the last 34 years, calls logically for a correspondingly substantial increase in the original thresholds at least and, ultimately, for repeal of Subpart DD. Putting aside, for the sake of argument, the increased strength of state/local PM control programs, the minimum increase should be on the order of 250 percent at least – such that the new thresholds would be 3.5 million and 8.8 million bushels, respectively. EPA has broad discretion to raise the thresholds to those levels. They are "appropriate" and rationally based. Maintaining the thresholds at current levels would be "inappropriate" and irrational.

3. The Capacity of Temporary Storage Facilities (TSFs) Should Not Be Considered When Determining Whether a Source Is Subject to Subpart DDa.

The fundamental purpose of a TSF is for bulk storage of grain on a temporary basis. TSFs generally experience a single turnover annually. In 2010, the Coalition's technical consultant, RTP Environmental Associates, Inc. (RTP), analyzed the responses to a 2009 EPA §114 survey. The responses collectively contained data for 121grain elevators, including data representing 119 storage-unit-years of TSF operation. According to the section 114 data, annual turnovers for TSFs average about 0.9, with only a few units experiencing as many as two turnovers annually. This analysis is consistent with EPA's own analysis. The low rate of TSF turnovers make sense, given that filling and emptying a TSF are labor intensive and time-consuming, and therefore not routinely done on a daily, weekly, or even monthly basis.

In stark contrast, the rate of turnovers at permanent grain storage is much higher – averaging about 9.3 per year, based on the section 114 data. That relatively high rate of turnover makes sense as well, because permanent storage and grain handling obviously are structured to operate much more efficiently and rapidly than TSFs.

These major differences in turnover rates and structure are so great, and so well substantiated by the section 114 data, that there is no need for Subpart DDa applicability purposes to consider the capacity of TSFs in determining Subpart DDa applicability. TSF capacity should not be considered in the Subpart DDa applicability determination for the following reasons:

- As discussed above, TSFs are starkly different from permanent storage capacity in all key respects, namely: structure, function, operation, and annual emissions of particulate matter (PM). There is no commonality that justifies grouping TSF capacity with permanent capacity from the standpoint of the logic of section 111(b) of the Clean Air Act. TSFs are not a "subcategory" of permanent storage capacity within the meaning of section 111.
- TSF are truly temporary. They are intended to handle intermittent surges and surpluses and, hence, are not necessarily used every year. For example, low crop yields in a given year likely result in less collective use of TSFs. As can be seen in the section 114 data, the amount of permanent storage capacity nationwide exceeds the amount of temporary storage capacity by an order of magnitude, thereby underscoring the concept that future TSFs, if any, do not pose a significant risk to air quality that justifies regulation at the national level in the form of an NSPS. In other words, TSF capacity is too environmentally insignificant to be a rational basis for triggering Subpart DD applicability. State/local air pollution control agencies are able to address TSFs satisfactorily.
- Finally, the underlying data indicate that TSF emissions are too environmentally insignificant to justify regulation at the national level in the form of an NSPS, including having TSF capacity count towards permanent storage capacity at a fractional level. As noted above, the ratio of turnovers and, hence, emissions of TSFs versus permanent storage is roughly 1-to-10. But that is only a comparison of one bushel of TSF capacity versus one bushel of permanent storage. Since Subpart DD is a national-scale rule, logic calls for taking also into account the ratio of TSF capacity nationally to permanent storage nationally, as reflected in the section 114 data. That

> ratio is also less than 10 percent, meaning that on a national basis, uncontrolled TSF emissions amount to less than 1 percent of the uncontrolled emissions associated with permanent storage. Emissions of such a small magnitude would not be worth regulating by means of an NSPS or of counting any fraction of TSF as "permanent" capacity.

In sum, on the basis of the Subpart DD rulemaking record and the section114 data, TSF capacity is clearly not the same as permanent storage capacity and, therefore, should not be considered at all in making Subpart DD applicability determinations. The CAA gives EPA broad discretion, subject to principles of rationality, to structure NSPS applicability provisions, and therefore has ample authority to make the change that the Coalition here requests – namely, the exclusion of any TSF capacity from "permanent capacity."

4. Truck Unloading Stations Used Exclusively for Temporary Storage Units Should Not Be a Subpart DDa Affected Facility.

Subpart DDa, as proposed, includes the following definition of a "grain unloading station" at section 60.301a(k):

> Grain unloading station means that portion of a grain elevator where the grain is transferred from a truck, railcar, barge, or ship to a receiving hopper or to the grain handling equipment that connects the unloading station to the rest of the grain elevator. A grain unloading station includes all of the equipment, support structures, and associated dust control equipment and aspiration systems required to operate or otherwise connect to the grain unloading station.

On its face, this definition appears to encompass loading and unloading equipment at temporary, as well as permanent, storage units. However, as proposed, Subpart DDa excludes from the particulate emissions limits at section 60.302a(b) those "grain handling, loading, or unloading affected facilities at a TSF using portable equipment."[19] This exclusion is appropriate given the nature of this equipment and its associated emissions, and the Coalition supports EPA's reasoning in making this exclusion. But the exclusion does not go far enough because of its implication that fixed (*i.e.*, non-portable) handling, loading, or unloading equipment at a TSF are subject to the particulate emissions standards at section 60.302a(b). The imposition of the proposed particulate matter emissions standards to any loading or unloading station that is in *dedicated* service to temporary storage facilities provides little environmental benefit, but comes with highly disproportionate costs. Thus, EPA lacks authority to include TSF-dedicated equipment within the definition of "affected facility" because it would not be "appropriate" to do so within the meaning of section 111(b)(1)(B) of the CAA. Also, even if it were appropriate to treat such equipment as an "affected facility," EPA nonetheless lacks authority to set an emission standard reflecting the application of fabric filter technology or the use of a three-sided shed, as

[19] 79 Fed. Reg. at 39264.

EPA proposes to do here, because the cost-effectiveness of controlling PM10 emissions from such equipment would be "exorbitant" in relation to benefits. *Essex Chemical,* 486 F.2d at 433.

First, consider EPA's projection of the environmental benefit that would result from regulating fixed loading or unloading equipment dedicated to TSF service. According to EPA's own calculations, a total of merely 5.8 tons per year of PM10 emissions reductions would be achieved at most *nationwide* through implementation of this proposed national standard.[20] This value hardly meets the test for environmental significance on a national scale, as it represents just 0.00003 percent of the current national PM10 emissions inventory.

Next, consider the costs of regulating this subcategory of "affected facilities." Even using EPA's seriously flawed cost estimates, the costs of fabric filter control for this subcategory of sources exceeds $69,000 per ton of PM10 controlled. Using the Coalition's corrections (see discussion in Section V.A.2 herein), the control costs would be in excess of $90,000 per ton of PM10 controlled. These values are "exorbitant" (*Essex* Chemical) by any measure, and are highly indicative of the air quality insignificance of TSF-dedicated truck loading/unloading stations. Fabric filters are not BSER for TSF-dedicated loading/unloading stations.

For these reasons, there is no rational basis for regulating such TSF-dedicated stations because their uncontrolled PM10 emissions are miniscule nationally and the large cost of control cannot be justified by reduction in those emissions. Absent a rational basis, EPA lacks authority to regulate them by means of fabric filters.

5. EPA's Proposed Default Equation (Equation 2) for Evaluating the Significance of TSF Capacity Relative to Permanent Storage Capacity at Grain Elevators Is Biased and Therefore Attributes Too Much Significance to TSF Capacity.

In support of proposed Subpart DDa, EPA's analysis of TSF significance includes the following assessment:

> Emissions from affected facilities at grain elevators are proportional to the amount of grain throughput. Consequently, affected facilities associated with TSFs have ***significantly less*** emissions than affected facilities associated with other types of storage units, and the capacity of TSFs, as an indicator of emissions, is not a one-to-one equivalency to the capacity of other types of storage units. [emphasis added][21]

The Coalition supports this view as being consistent with its members' experience and with the section 114 survey data.

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[20][2] Value derived from the sum of DDa impacts for these affected facilities in Scenarios 6b, 7 and10 as found in EPA's *Impact Analysis* (EPA-HQ-OAR-2010-0706-0087).

[21] *See Determination of Permanent Storage Capacity Equivalents for Temporary Storage Facilities,* at 2 (Dece. 2013) (EPA-HQ-OAR-2010-0706-0093) (hereinafter, the "*TSF Equivalency Analysis"*).

However, in the same document cited above (*i.e.*, the *TSF Equivalency Analysis*), EPA accepts that the survey data show that grain throughput for an average bushel of permanent storage capacity is nine times higher than the grain throughput for an average bushel of TSF capacity.[22] Yet despite this fact, EPA proceeds on to develop an accounting system which, in default mode, treats TSFs as if the permanent-to-temporary storage throughput ratio is closer to 3-to-1. In other words, based on the section 114 survey data, EPA's default TSF equivalence ratio overstates the environmental significance of TSFs by more than a factor of three.

EPA arrives at its 0.34 default TSF equivalence ratio (see section 60.301a(l)(2)) through a biased analysis of the section 114 survey data. Bias is introduced in two ways. First, EPA ignores those facilities in the survey that do not operate a TSF. This approach eliminates data from over 80 percent of the facilities that responded to the survey.[23] Because the proposed Subpart DDa rule is addressing grain elevators at a national level, it is highly inappropriate to ignore data from more than 80 percent of grain elevators in determining TSF significance. Such an approach is illogical given the premise that EPA is attempting, through the proposed equations at section 60.301a(l), to assign *national* environmental significance to TSF capacity relative to the significance of permanent storage capacity. Ignoring the permanent storage capacity associated with more than 80 percent of the elevators grossly overstates the importance of TSF capacity on a national level.

A second element of bias lies in the way EPA chose to analyze the data from the 20 elevators it selected from the survey responses. EPA computes an average equivalency ratio for each of the 20 elevators and then computes a simple average of the individual elevator average ratios to determine an overall average equivalency ratio for the 20 elevators. The results are values of 0.47, 0.37 and 0.34 for the years 2005, 2006, and 2007, respectively. A weighted average computed using exactly the same underlying data yields equivalency ratios of 0.22, 0.21, and 0.21 for 2005, 2006, and 2007 respectively. Even assuming it is appropriate to ignore more than 80 percent of the reported permanent storage capacity in the survey data, if the goal of EPA's proposed default equation is to reflect the significance of TSF emissions relative to permanent storage capacity emissions at only those elevators with a TSF, the use of an unweighted average in the analysis clearly yields a biased result.

In summary, the methodology used by EPA in developing the default TSF equivalency ratio of 0.34 is seriously flawed in that it: (1) ignores more than 80 percent of the permanent storage capacity in the section 114 survey data; and (2) biases the resultant equivalency ratio high though the use of an unweighted average. The combination of these flaws causes the default

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[22] *Id*. Arriving at a ratio 9-to-1 is due in part to rounding. The survey data actually show that the ratio is 10-to-1 because the throughput ratio for the average TSF is closer to 0.9 bushels per bushel.

[23] The Coalition's analysis indicates that a total of 26 facilities that responded to the section 114 survey reported operating a TSF in one or more years. EPA's assessment is based on only 20 of these facilities, with six presumably ignored because "grain throughput was not provided in any of the three years or if the permanent storage unit was indicated to be constructed after 2007." According to EPA, 121 grain elevators responded to the survey. Thus, EPA's approach to evaluating TSF significance is based on only 20 of the 121 elevators that responded to the survey. This approach ignores at least 450 million bushels of permanent storage capacity out of a total of about 525 million bushels of permanent storage capacity as reported in the section 114 surveys.

equation to overstate the national environmental significance of TSF capacity by more than a factor of three.

The Coalition maintains that TSFs are insignificant from a national air quality standpoint and should not be considered at all in determining Subpart DDa applicability. But in any event, the appropriate equivalency ratio that should be used in determining the environmental significance of TSF capacity is 0.1, as described in an analysis that the Coalition submitted to EPA in late 2012, namely: RTP Environmental Associates, *Method for Evaluating the Significance of Temporary Storage Capacity* (Nov. 8, 2012) (attached hereto as Attachment D). That analysis is hereby incorporated by reference.

7. EPA's Approach to Calculating a Site-Specific Equivalency Ratio (Equation 1) for TSF Capacity Is Nonsensical

As proposed, the default TSF capacity equivalency ratio of 0.34 addressed in the preceding comment applies only to a subset of potentially affected facilities under Subpart DDa. Other facilities are required, pursuant to section 60.301a(l)(1) to calculate a site-specific TSF equivalency ratio. Under this scheme, the environmental significance of a bushel of TSF capacity varies from location-to-location even though the emissions associated with that same bushel of capacity are for all intents and purposes unaffected by the location. Consider the following example.

> *Assume there are two physically identical grain elevators located on the East and West side of Jefferson City, Missouri (i.e., the East Side Elevator and West Side Elevator respectively). Each of these elevators has a permanent storage capacity of 2.2 million bushels and neither elevator has a TSF. Due to a projected bumper corn crop, each of these elevators determines that construction of a 1 million bushel TSF will be needed to handle the upcoming harvest surge. Over the past five years, the East Side Elevator had a maximum annual throughput of 5 million bushels while the West Side Elevator had a maximum annual throughput of 10 million bushels. Using the proposed Equation 1, the total permanent storage capacity (C_{tp}) of the East Side Elevator after construction of the 1 million bushel TSF will be 2.64 million bushels, making the East Side Elevator a grain terminal elevator potentially subject to certain requirements of Subpart DDa. After construction of its 1 million bushel TSF, the West Side Elevator would have a total permanent storage capacity of 2.42 million bushels. Thus, the West Side Elevator would remain exempt from Subpart DDa, despite the fact that it has higher throughputs and thus higher PM10 emissions than the physically identical East Side Elevator.*

This outcome is clearly nonsensical and therefore not an "appropriate" or rational element of the conditions that trigger the applicability of Subpart DDa. Yet directionally, the outcome of this example can be generalized: existing elevators with high permanent storage capacity throughput rates will always have lower TSF equivalency ratios when compared with elevators with lower throughput rates. Also, as a general matter, the proposed rule structure inevitably will impose a larger compliance cost burden on those elevators that are less likely to be able to afford that burden if one assumes that grain throughput is an indirect measure of elevator profitability.

The Coalition has identified another inequity that will result from implementation of the dual-applicability scheme proposed by EPA. This inequity stems from the fact that in some cases, a retrospective evaluation of a Subpart DDa applicability triggering event, as determined through the use the default equivalence ratio of 0.34, might not have triggered applicability based on post-event actual throughput data. In other words, a facility required by proposed Subpart DDa to use the 0.34 equivalence ratio to determine applicability might actually have an equivalence ratio of 0.1 (as computed using Equation 1) once operations commence. Thus, this facility would be subject to DDa requirements prospectively, whereas a similar facility with an existing track record of throughput engaging in a similar project would not be subject to any Subpart DDa requirements.

The section 114 survey data and EPA's own analysis of that data clearly show that by-and-large, any given TSF will experience one annual turnover regardless of its location. This undisputed fact means that a bushel of TSF storage capacity has the same environmental significance regardless of its location and regardless of how the permanent storage at a given elevator is utilized. Thus, assuming that TSF capacity should be counted at all, the only equitable and logical way to evaluate the environmental significance of a bushel of TSF storage capacity is using a constant equivalency factor. And the section 114 survey data clearly show that this factor should be no more than 10 percent when evaluated against the environmental significance of permanent storage capacity. Any other method of determining TSF storage capacity equivalency is inequitable and illogical in relation to the purposes and parameters of EPA's authority under section 111(b). Moreover, any other method would violate the requirements of the PRA (*e.g.*, the "necessity" requirement) and of E.O. 13563 (all rules must be based on sound science).

Therefore, Assuming that EPA decides to include some fraction of TSF capacity in determinations of permanent storage capacity, the Coalition urges EPA to adopt 0.1 as the applicable fraction across all scenarios.

8. The Proposed Definition of Permanent Storage Capacity Is Ambiguous and Must be Clarified

As explained above, careful analysis shows that TSFs are insignificant sources of PM10 emissions and they should not be regulated by an NSPS. However, if Subpart DDa becomes a final rule and if that rule includes TSF capacity in determining applicability and if the applicability determination is based on site-specific throughput data, then EPA must improve the definition of "permanent storage capacity." Specific areas that need to be addressed in this definition are reviewed below.

The term T_p

The term T_p is "defined" in section 60.301a(2) as the:

> Maximum annual throughput of grain for all buildings, bins (excluding TSFs) and silos used to store grain (bushels per year) over the previous 5 years.

This definition is ambiguous because it leads to a number of questions. For example, does the term "maximum annual throughput" refer to the maximum throughput in a calendar year or the maximum throughput in any consecutive 12-month period? Is throughput equated to grain receipts, grain shipments, or some other measure of grain-handling rates? And what sets the start and end dates for the five-year period? Under principles of due process and rationality, EPA must address each of these issues if Equation 1 persists in some form in the final Subpart DDa rule.

Pursuant to the aforementioned issues, as to the above, the Coalition recommends that grain receipt records be used as a measure of throughput because these records are readily available. The Coalition also recommends the use of a consecutive 12-month period as the basis for determining maximum throughput and further, consistent with this approach, we recommend the period should run for 60 months prior to the date that the construction event that might trigger Subpart DDa applicability is is projected to commence.

Use of Equation 1 for Existing Elevators:

Although the Coalition maintains that the use of Equation 1 is inappropriate and, as supported by the facts, it should not be included in the final rule, its existence in the proposal raises another fundamental question: If an existing elevator has a record of permanent storage throughput and capacity, why does the construction of a single bushel of additional storage capacity (whether permanent or temporary) trigger the requirement to use Equation 2? If Equation 1 remains in the final rule, EPA should, as on option, allow the use of this equation when an existing elevator is adding capacity provided, data exist to allow the pre-change equivalency ratio to be calculated.

9. The Proposed Definition of Wire Screen Column Dryer Is Inconsistent with the Preamble Discussion of This Dryer Subcategory

The preamble to the rule states:

> "Wire screen column dryer" is proposed to be defined to be any equipment used to reduce the moisture content of grain in which the grain flows from the top to the bottom in one or more continuous packed columns between two woven wire screens or between a combination of perforated metal sheets and wire screens. [79 Fed. Reg. at 39248 col. 1.]

The proposed definition of a wire screen column dryer at Section 60.301a(s) is as follows:

> Wire screen column dryer means any equipment used to reduce the moisture content of grain in which the grain flows from the top to the bottom in one or more continuous packed columns between two woven wire screens.

In the Coalition's view, the obvious discrepancy between the preamble and the proposed rule language will cause confusion should Subpart DDa become a final rule. Moreover, the preamble language more accurately reflects real world circumstances. The Coalition respectively requests that EPA adopt the preamble language into the ultimate definition if it proceeds with a final rule.

10. Wire Screen Column Dryers Should Not Be Regulated by Subpart DDa.

As noted above, in the preamble to the instant proposal, EPA acknowledges that wire-screen column dryers are not subject to regulation under Subpart DD as promulgated in 1978:

> In its review of the grain elevator industry, the EPA found that an additional type of column grain dryer *not addressed in subpart DD* is now being used. Most rice dryers currently use column dryers with woven wire mesh screens in place of, or in addition to, perforated plates because perforated plates damage the rice kernel, are less efficient for rice drying and are not durable.[24]

The Coalition agrees with EPA's assessment that such dryers are not affected facilities under Subpart DD as promulgated originally.

Within the context of Subpart DDa, EPA now is proposing to regulate these dryers by establishing an opacity standard.[25] Yet, EPA's five-year projections show that Subpart DDa will not have any effect on emissions from these dryers.[26] Thus, the addition of wire-screen dryers to the universe of Subpart DDa affected facilities equates to imposing a regulation with costs, but without a resultant emissions-reduction benefit. EPA's own analysis clearly demonstrates that the wire-screen dryer sub-category lacks environmental significance, and therefore calls for continued exclusion of this type of dryer in any national emissions standard under section 111(b). Regulation of wire-screen column dryers by means of an NSPS would not be "appropriate" within the meaning of section 111(b), nor defensible under the criteria of the PRA and E.O. 13563.

11. *En-Masse* Barge Unloaders Should Not Be Regulated by Subpart DDa.

In the preamble to proposed Subpart DDa, EPA makes the following observations:

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[24] 79 Fed. Reg. at 39252 col. 2 (emphasis added).

[25] Proposed section 60.302a(a)(3), 79 Fed. Reg. at 39264 col. 2.

[26] In EPA's analysis of the impacts of Subpart DDa, the only scenario that impacts wire-screen dryers is Scenario 11, and this scenario is identified as having zero emissions reductions associated with it (see EPA's *Impact Analysis*, Tables 2-3 and 3-1 respectively (EPA-HQ-OAR-2010-0706-0092).

> Since the EPA's last review of subpart DD, several new barge unloading mechanisms have been developed and used, at least one of which does not utilize a bucket elevator or marine leg, and, as such, cannot use the design standards.
>
> Some barge unloading stations currently use en-masse drag conveyors, which were not in use the last time we reviewed subpart DD. En-masse drag conveyors operate under a different principle than bucket elevators or marine legs.[27]

The above statements do not clarify whether, in EPA's view, *en-masse* drag conveyors currently are subject to regulation under Subpart DD. The Coalition's analysis is far less nebulous. As discussed in an earlier section of these comments, a careful review of the provisions in section 60.302(d) of current Subpart DD and the relevant rulemaking record leads to the conclusion that the Subpart DD requirements apply *only* in those situations where an affected barge unloading operation employs a bucket elevator unloading leg to remove grain from a barge or ship. Other types of barge and ship unloading operations, such as an *en-masse* drag conveyor, are not subject to any specific requirements under Subpart DD. This interpretation is consistent with the data and information EPA used as the basis for establishing the requirements in Subpart DD.[28]

Within Subpart DDa, EPA now is proposing to regulate *en-masse* drag conveyors when used for barge or ship unloading.[29] Yet, EPA's five-year projections show that Subpart DDa will not have any effect on emissions from unloading operations employing *en-masse* drag conveyor systems.[30] As with wire screen column dryers, the addition of *en-masse* conveyors to the universe of Subpart DDa affected facilities equates to imposing a regulation with costs, but without any resultant emissions reduction benefit. EPA's own analysis clearly demonstrates that emissions from *en-masse* conveyors used for unloading lack environmental significance. This fact clearly argues for continued exclusion of these conveyor systems in any national emissions standard. Inclusion would be breach of the requirements of the CAA, PRA and E.O. 13563.

12. The Proposed Subpart DDa Definition of a TSF Is Correct.

The Coalition has reviewed and supports the EPA's definition of temporary storage facilities (TSF) *i.e.*, systems that consist of "permanent asphalt or concrete foundations," "rigid sidewalls," "long-lasting tarp covers," "permanent aeration towers," and "conveyor systems."

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[27] 79 Fed. Reg. at 39251 col. 2.

[28] For additional details of the Coalition's analysis, refer to the memorandum *Applicability of and Alternatives to the Current NSPS Subpart DD Barge Unloading Standard* found at *EPA-HQ-OAR-2010-0706-0080.pdf*.

[29] Proposed Section 60.302a(d)(2), 79 Fed. Reg. at 39264 col. 3.

[30] In EPA's analysis of the impacts of Subpart DDa, the only scenario that impacts *en-mass* unloaders is Scenario 11, and this scenario is identified as having zero emissions reductions associated with it (see EPA's *Impact Analysis*, Tables 2-3 and 3-1 respectively (EPA-HQ-OAR-2010-0706-0092).

13. Miscellaneous

Proposed section 60.300a(a), which addresses applicability of Subpart DD, cross-references "§ 60.304a(b)". *See* 79 Fed. Reg. at 39263 col. 2. Given the subsequent changes in the numbering of proposed Subpart DDa, that reference should be to section 307a(a). *See* 79 Fed. Reg. at 39265 col. 3 (addressing "Modifications").

C. <u>Performance Standards in Proposed Subpart DDa</u>

This section of our comments focuses on the emissions standards that EPA proposes to build into Subpart DDa, the version of the grain elevator NSPS that would apply to grain elevator "affected facilities" that are constructed, modified or reconstructed after July 2014. It reflects, among other things, the Coalition's strong disagreement with EPA's proposal as to various opacity standards and its treatment of startup, shutdown and malfunction (SSM) events.

1. The Present Record Lacks a Proper Basis for Establishing Opacity Standards for Grain Elevator Fugitive Emission Sources

In Subpart DDa, EPA is proposing to establish numeric opacity limits for certain affected facilities at grain elevators. After careful review of the record supporting the proposed Subpart DDa standard, the Coalition believes that EPA has failed to adequately support those opacity limits listed below:

Affected Facility	Proposed Numeric Limits (% Opacity)
Any individual truck unloading station, railcar unloading station, or railcar loading station	>5%
Any truck loading station	>10%
Any barge or ship loading station	>20%
Any barge or ship unloading station using an *en-masse* drag conveyor	>10%
Any wire screen column dryer	>10%

The Coalition's review of the record related to these limits revealed structural flaws in the factual basis and methodology underlying the proposed limits, as well as specific problems with the data and analysis employed by EPA in establishing certain of these limits.[31] The bases for the Coalition's conclusions regarding the factual basis and methodology underlying the proposed limits are described in the following paragraphs of this subsection V(C)(1). Specific comments related to the proposed numeric opacity limits for wire screen column dryers and *en-masse* barge unloading are provided below in subsequent subsections of section V(C).

[31] The Coalition's critique here of EPA's proposal of non-zero opacity limits applies also to EPA's proposal of zero opacity limits. In the event that EPA in response to these comments reconsiders and revises the former limits, it should do the same for the zero opacity limits.

Failure to Validate Method 9 for Fugitive Grain Dust

In 1971, EPA established Method 9 as a means of determining compliance with NSPS opacity standards.[32] As originally promulgated, Method 9 was used to measure the opacity of emissions of air pollutants exclusively from *stacks*, as is evident from the following rule language:

> The qualified observer stands at least two *stack* heights but not more than a quarter of a mile from the base of the *stack* with the sun to his back. From a vantage point perpendicular to *the plume*, the observer studies the point of greatest optical density in the plume.[33]

Also in 1971, EPA established NSPS for the portland cement industry. Those final standards included a 10 percent opacity standard for each affected facility. Compliance with the opacity standard was to be determined using Method 9.[34] The final portland cement standards were challenged in court and, as a result of that challenge, remanded to EPA by the court.[35] In the *Portland Cement Association (PCA*) remand, the court directed EPA to reconsider among other things the use of the opacity standards. As a result, EPA conducted an assessment of the portland cement opacity standards and of Method 9 itself. This assessment resulted in revisions to both the portland cement opacity standards and Method 9. In revising Method 9, EPA conducted studies of the precision and accuracy of qualified observers of essentially stack emissions and made the following determinations[36]:

(1) For black plumes (133 sets at a smoke generator), 100% of the sets were read with a positive error* of less than 7.5% opacity; 99% were read with a positive error of less than 5% opacity.

(2) For white plumes (170 sets at a smoke generator, 168 sets at a coal-fired power plant, 298 sets at a sulfuric acid plant), 99% of the sets were read with a positive error of less than 7.5% opacity; 95% were read with a positive error of less than 5% opacity.

* For a set, positive error = average opacity determined by observer's 25 observations - average opacity determined from transmissometer's 25 recordings.

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[32] 36 Fed. Reg. 15704 (Aug. 17, 1971).

[33] *Id*. at 15722 (emphasis added)..

[34] 36 Fed. Reg. 24876 (Dec. 23, 1971).

[35] *Portland Cement Association v. Ruckelshaus*, 486 F.2d 375 (D.C. Cir. 1973).

[36] *EPA Response to Remand Ordered by U.S. Court of Appeals for the District of Columbia Circuit in Portland Cement Association v. Ruckelshaus (486 F.2d 375, June 29, 1973),* at 140 (Nov. 1974) (EPA-450/2-74-023).

Through discussion with a former EPA staff member involved with the Method 9 evaluation effort[37] and from the Coalition's review of available records (see below), the Coalition has determined that EPA's efforts in assessing Method 9's precision and accuracy in response to the *PCA* remand never specifically evaluated the method for use on non-stack (*i.e.*, fugitive) emission sources.[38]

Method 9, as revised in response to the *PCA* remand and EPA's subsequent evaluation efforts, provides general guidance intended to promote consistent results. Specifically the procedure describes the following requirement in regards to the position of a qualified observer:

> The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction, and when observing opacity of emissions from rectangular outlets (e.g. roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case the observer should make his observations with his line of sight perpendicular to the longer axis of such a set of multiple stacks (e.g. stub stacks on baghouses).[39]

The notable difference in this language as compared to the original Method 9 procedure language is that the revised method was effectively expanded to include certain non-stack sources (*i.e.*, those with a "rectangular outlet"). Even this modest expansion of scope, however, appears to have been made without the necessary research to validate the precision and accuracy of opacity observations at such "rectangular outlet" sources, much less other non-stack sources such as grain dryers or ship/barge unloading operations.[40]

Around the time Method 9 was revised in response to the *PCA* remand, *i.e.*, in 1975, EPA separately published guidance on making opacity measurements including guidelines for non-

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[37] Telephone call between Jack M. Burke, RTP Environmental Associates Inc., and Mr. Robert L. Ajax, former Chief of U.S. EPA's Emissions Measurement Branch, November 13, 2014.

[38] This finding is also consistent with a recent federal district court decision. *See Consolidated Environmental Management, Inc.—Nucor Steel Louisiana v. Zen-Noh Grain Corp.*, 981 F. Supp. 2d 523, 538 (E.D. LA, Nov. 5, 2013) ("… the Court is not aware of any tests indicating the accuracy of Method 9 when used to observe fugitive as opposed to stationary source emissions.").

[39] 39 Fed. Reg. at 39874 (Nov. 12, 1974).

[40] This statement is based on the Coalition's research into whether non-stack source opacity observation precision and accuracy were evaluated in the same manner as stack opacity precision and accuracy observations were. The Coalition can find no evidence that they were thus evaluated.

stack emission sources.[41] As it relates to grain elevator sources, this guidance is quite limited. Reproduced below is the entirety of the section of the guideline relevant to grain elevator sources:

> Visible emissions should be evaluated as material is discharged at conveyor belt loading and transfer points. Evaluation should be made at the same elevation as the discharge, if possible. See Figure 4.3a.[42]

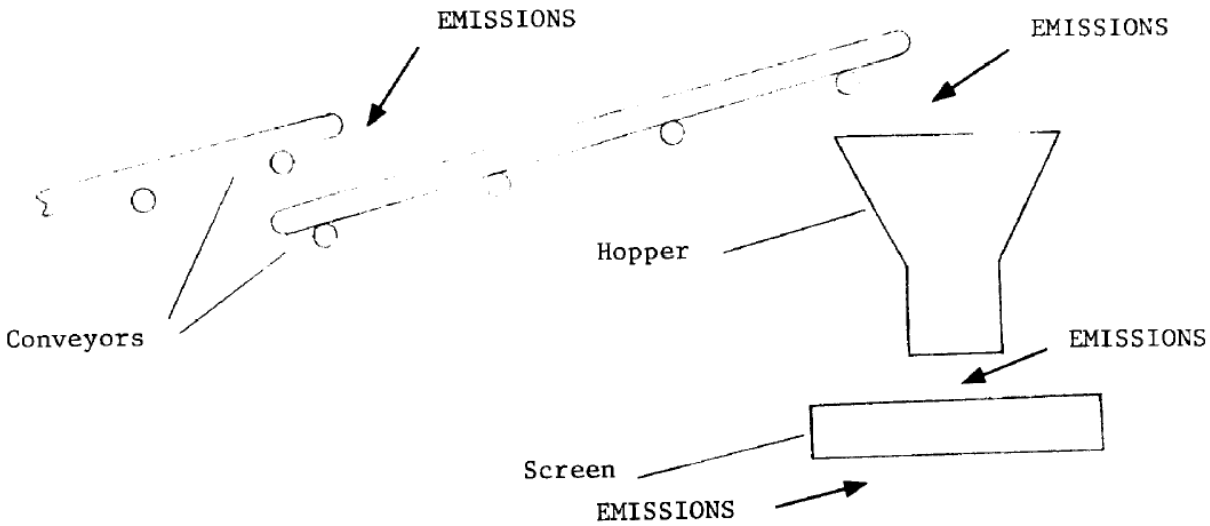

Figure 4.3a: CONVEYING-SCREENING EMISSIONS

The above single sentence and figure constitute the entire extent of the methodological guidance on which EPA apparently relied in building the necessary data sets for establishing the the original (1978) Subpart DD NSPS fugitive opacity standards. Although the current guidance is somewhat more extensive, it is also very limited. Further, EPA's fugitive opacity guidance (past or present) is nowhere supported by the sort of empirical studies that are necessary to validate the test methodology as to accuracy and precision, despite the obviously material differences between stack emissions and fugitive dust emissions, especially fugitive *grain* dust emissions. Putting any fugitive grain elevator opacity standards into final effect on a going-

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[41] See USEPA, *Guidelines for Evaluation of Visible Emissions*, April 1975 (EPA-340/l-75-007). Subsequent to this date, EPA published some additional guidance on making opacity observations from fugitive sources (see USEPA, *Quality Assurance Handbook for Air Pollution Measurement Systems: Volume Ill. Stationary Source Specific Methods*, Addition Section 3.12.4, p. 17). However, that guidance was not available at the time the original Subpart DD opacity standards were established.

[42] *Id*, at 4.3.

forward basis, would be arbitrary and capricious, without first performing those studies and providing a meaningful opportunity for notice-and-comment.

Failure to Supply Any Data Whatsoever in Support of Certain Opacity Standards

As noted in the preceding paragraph, three of the non-zero opacity standards that EPA is proposing for Subpart DDa originated in the 1978 rulemaking. For convenience they are listed in the table below.

Affected Facility Description	Proposed Opacity Limits
Any individual truck unloading station, railcar unloading station, or railcar loading station	>5%
Any truck loading station	>10%
Any barge or ship loading station	>20%

The Coalition's research has revealed that the data upon which those three opacity standards were based must lie, if anywhere, in the second of the three technical support documents that EPA listed in the reference section of the *Federal Register* notice of the final rule, 43 Fed. Reg. 34340, 34347 col. 1 (Aug. 3, 1978). This is because the necessary data do not lie in the other two technical support documents. The Coalition, however, has not been able to locate that third document. It is not present in the e-docket for the instant proposal and, despite a diligent search, the Coalition has not found it anywhere else. The document as it is referenced in the *Federal Register* notice is titled: "'Draft – For Review Only: Evaluation of Public Comments: Standards of Performance for Grain Elevators,' U.S. Environmental Protection Agency – OAQPS, Research Triangle Park, N.C., August 1977."

The absence in the record for the instant rulemaking of data to support the previously cited three opacity standards means that it would be unlawful for EPA to keep them in final effect on a going-forward basis (*i.e.*, as governing affected facilities that are new, modified or reconstructed after the July 2014 proposal date). In accordance with statutory command, EPA now is engaged in a "review" of Subpart DD and has proposed to continue to keep those three standards in effect on a going-forward basis. EPA, however, has failed to provide the technical basis (*e.g.*, factual basis and methodology) for doing so, thereby violating one of the cardinal procedural requirements of section 307(d)(3) of the CAA and depriving the Coalition of the opportunity to comment on that basis. Moreover, if EPA were to keep those three opacity standards in effect without such technical basis, it would be acting in violation of the principles of rationality as expressed in section 307(d) and case law, notably the Supreme Court's decision in *State Farm*, as discussed earlier in these comments (see page 55). EPA has the burden in the first instance of supporting its decisions with substantial evidence and adequate explanation. In the context of the statutory "review," EPA cannot maintain standards on a going-forward basis as to which it has failed to provide both a meaningful opportunity to comment and substantial evidence plus explanation.

The Coalition respectfully requests that EPA either withdraw the present proposal or obtain the necessary emissions data and re-open the comment period.

Failure to Follow EPA's Own Guidance

Subsequent to the promulgation of the three Subpart DD opacity limits listed above, EPA did provide some additional guidance on making Method 9 observations. However, as described later in these comments, some of the opacity observations that underlie the proposed Subpart DDa standards for wire screen column dryers and *en-masse* barge unloading fail even to follow that guidance.

Failure to Assemble a Sufficiently Robust Emissions Dataset upon Which to Set NSPS Opacity Standards

EPA has long acknowledged the many various factors that have the potential to influence perceived opacity of fugitive emissions. In addition to factors specific to the grain elevator industry, such as the type of grain, inherent dustiness of the grain, moisture content of the grain, and variations in deposition rates for different size particles,[43] EPA recognized some 24 variables that can affect plume opacity.[44] For example, EPA has stated that mean particle size and polydispersity of emissions "can significantly affect plume opacity."[45] EPA also acknowledged that it must consider the "maximum expected effects of normal variations in these factors on opacity"[46] in setting performance standards. In the Coalition's view, in the instant rulemaking, EPA has fallen short of its own recognition when it comes to considering and evaluating grain elevator-specific factors that affect the proposed opacity limits for fugitive emissions.

Per post-1978 EPA guidance for determining the opacity of fugitive emissions, certain requirements of Method 9 are identical to requirements for performing stack opacity observations, such as: (i) the sun angle must be in the 140 degree sector at the observer's back; (ii) the observer must stand at a distance sufficient to provide a clear view of the emissions (the preferred distance is between 3 stack heights and ¼ mile;[47]); (iii) the observer must, to the extent possible, be positioned perpendicular to the plume direction (based on wind direction); (iv) the observer should make observations perpendicular to the longer axis of the emissions plume when observing rectangular or non-circular sources; and (v) the observer's line of sight should not include more than one plume at a time. Other considerations include the area of the plume, wind speed, and contrast between the plume and the background. These last variables cannot always be controlled yet they can bias opacity observations. Accordingly, even if EPA had validated

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[43] 43 Fed. Reg. 34342 (Aug. 3, 1978)

[44] *See* USEPA, Public Comment Summary: Opacity Provisions Under Standards of Performance for New Stationary Sources of Air Pollution, at 23 (Aug. 1975) (available on-line from National Service Center for Environmental Publications (NSCEP).

[45] *Id.* at 24.

[46] *Id.*

[47] USEPA, Quality Assurance Handbook for Air Pollution Measurement Systems: Volume Ill. Stationary Source Specific Methods, Addition Section 3.12.4, at 5 (available on-line from National Service Center for Environmental Publications (NSCEP).

Method 9 for fugitive emissions, which it has failed to do, careful consideration must be given to these variable factors in making opacity observations from fugitive sources and a robust database of observations is needed before NSPSs for such sources can be established. Any attempt to establish NSPS opacity standards for grain elevators using a limited set of emissions data is inherently arbitrary and capricious.

Here, as explained below, judging from the present record, EPA has failed to build a sufficiently robust dataset in the cases of wire screen column dryers and *en-masse* barge unloading operations. As for the three original opacity standards that EPA proposed to continue in effect on a going-forward basis, EPA has provided no underlying opacity dataset whatsoever. In present circumstances, EPA lacks an adequate basis for promulgating any opacity standard for grain elevators on a going-forward basis.

Failure to Take the Large Margin of Error for Opacity Observations into Account in Setting Opacity Standards

EPA also has asserted that enforcement of opacity standards must recognize the inherent inaccuracy of the measurement method. When the issue of a potential 7.5 percent error in Method 9 observations was raised in early NSPS rulemakings (using as an example a 14 percent opacity plume with a 7.5 percent error), the EPA response was:

> The error of the method is considered at a time of enforcement of the standard. An opacity value of 21.5 percent (14 plus 7.5 percent) would not necessarily result in an enforcement action against the source because that level is clearly within the range of error of the method. Consequently, enforcement action would not be taken until appropriate consideration was given to the accuracy of the method. [48]

In establishing the opacity standards in Subpart DD, EPA stated that:

> "Observer error is also taken into account in enforcement of visible emissions standards. A number of observations are normally made before an enforcement action is initiated."[49]

And:

> [O]pacity standards are never enforced on the basis of a single six-minute reading. A number of opacity readings are made before an enforcement action is initiated.[50]

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[48] USEPA, Public Comment Summary: Opacity Provisions Under Standards of Performance for New Stationary Sources of Air Pollution, Aug. 1975, p. 13.

[49] USEPA, Standards Support and Environmental Impact Statement Volume 2: Promulgated Standards of Performance for Grain Elevator Industry, p. 2-10, EPA-450/2-77-001b, April 1978.

[50] *Id*, at p. 2-9.

While this may have been EPA's intent in 1975 and 1978, the substantial size of the margin of error is a critical consideration now in setting NSPSs rationally, especially with respect to fugitive emissions of grain dust from grain elevators. The Coalition believes that EPA must explicitly address the error and uncertainty associated with opacity observations in establishing any grain elevator opacity limits on a going-forward basis, as well as enforcing them.

Failure to Take Other Key Factors into Account

The point in the plume at which opacity observations should be made at *grain elevators* bears special mention. EPA's *Quality Assurance Handbook* identifies several factors that are unique to fugitive emissions: (i) each observation should be made at the same point in the plume (even though other points might have a higher opacity for subsequent readings); (ii) the plume may need to be observed at a point downwind where it has assumed a more conventional plume shape; and (iii) corrections to the observed opacity may be necessary if the observation angle is not perpendicular to the plume path.[51] These factors have not been -- and cannot be -- evaluated using the standard Method 9 smoke generators, because the generators cannot produce *fugitive* emissions. In other words, otherwise "qualified" Method 9 observers are not required to demonstrate proficiency in the use of these procedures for fugitive emissions. Likewise, EPA has not evaluated the precision and accuracy of the fugitive-specific procedures described in the *Quality Assurance Handbook*.

In addition to the general absence of demonstrated precision and accuracy, EPA's fugitive-specific opacity observation procedures highlight an issue unique to grain elevators. A significant amount of the "dust" emitted at a grain elevator is very large, with an aerodynamic diameter greater than 100 µm. For example, emissions from a corn dryer may consist of 25% *bees wings*[52] which have a mass mean diameter of 150 µm, and about 95% of grain dryer dust emissions are larger than 50 µm.[53] Indeed, the published percentage of grain dust at grain elevators that is larger than 100 µm ranges from a low of 45.9% (corn) to a high 65.7% (wheat and sorghum).[54] In other words, *most* dust emitted at grain elevators is *not* PM10 or TSP -- and thus is *not* a regulated pollutant.[55]

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[51] *Quality Assurance Handbook for Air Pollution Measurement Systems: Volume Ill. Stationary Source Specific Methods*, Addition Section 3.12.4, p. 17).

[52] The term "bees wings" is used in the grain industry to describe a light flaky material that breaks off from the corn kernel during drying and handling.

[53] *See* AP-42 (2003) § 9.9.1-14. AP-42 is accessible at: http://www.epa.gov/ttn/chief/ap42/.

[54] *See* Boac, et al., *Size Distribution and Rate of Dust Generated During Grain Elevator Handling*, Applied Engineering in Agriculture, Vol. 25(4) (Am. Soc. Ag. & Bio. Eng. 2009), pp. 533-541.

[55] The regulated pollutant for particulate matter for the purpose of Title V permitting and NSPS Subpart DD is PM10 and only PM10. *See Definition of Regulated Pollutant for Particulate Matter for Purposes of Title V*, Lydia N. Wegman, Deputy Director, OAQPS (Oct. 16, 1995). Likewise, the regulated pollutants for particulate matter for New Source Review (NSR) purposes are PM2.5, PM10 and TSP. NPRM, *Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM2.5): Amendment to the Definition of "Regulated NSR Pollutant" Concerning Particulate Matter*, 77 Fed. Reg. 65107, 65110-11 (Oct. 25, 2012).

This raises two issues. First, it undercuts one of EPA's stated purposes for imposing opacity standards in Subpart DD/DDa, namely to serve as an indicator that the emissions controls are maintained and operated properly so as to limit particulate matter emissions to the level achieved by the best system of emission reduction (considering cost).[56] Dust with diameter greater than 100 µm is less likely than PM2.5, PM_{10} or TSP to be captured by an aspirated enclosure.[57] Smaller particles, on the other hand (particularly those less than 20 µm) will not exhibit significant inertial effects and may be captured so long as the aspiration system generates enough air flow to pull air into the enclosure, accounting for extraneous air currents.[58] Thus, an aspiration system with a face velocity sufficient to capture 100% of PM10 and TSP might collect only a fraction of the larger dust generated by the source. In other words, an aspirated enclosure may work perfectly in controlling PM2.5, PM10 and TSP, and yet emit a visible plume made up of large dust. Thus, opacity of the plume – at least near to the source – is not an indicator of the performance of an aspirated enclosure.

Similarly, opacity of a fugitive plume near a grain elevator emission source may not be an indicator of emissions of regulated air pollutants. EPA guidance indicates that particles larger than 100 µm are likely to settle out within 20-30 feet of the point of emission, whereas particles that are 30 – 100 µm are likely to settle within a few hundred feet (depending on atmospheric turbulence).[59] Thus, within the within the first 30 feet of the fugitive source – and possibly further out – a grain elevator fugitive emission plume consists primarily of non-regulated dust. In this way, grain elevator fugitive emission plumes are like plumes that contain steam. Grain dust plumes, however, are more complicated than steam plumes. Unlike steam, which tends to evaporate quickly and stays evaporated, fugitive grain dust plumes may contain *bees wings*, which tend to float because "their velocity of fall is less than the velocity of much smaller particles having the same specific gravity but a spherical shape."[60] In other words, the opacity of a fugitive grain dust plume clearly is not a reliable indicator of PM10/PM2.5 emissions within the first 100 feet of a fugitive grain elevator source. In some cases, opacity may not be a reliable indicator even farther downwind.

In proposing opacity standards in Subpart DD/DDa, EPA has not adequately addressed any of these grain-specific issues, if at all. Although there is general guidance that fugitive plumes should be observed downwind of the source, there is no guidance of how to determine when the opacity of a plume of fugitive grain dust actually indicates the presence of a regulated pollutant or the performance of emission controls. There is no protocol for generating test "smoke" that mimics this effect, and there has been no demonstration of the error introduced when the observer must determine where to measure opacity in a fugitive grain dust plume. In

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[56] *See* Technical Support Document (1977), p. 8-9.

[57] *See* Hazard Prevention and Control in the Work Environment: Airborne Dust (WHO/SDE/OEH/99.14), p. 105 (noting that in design of aspirated enclosures, "Larger particles will require higher capture velocities [than small particles require], especially if they are generated by high-speed mechanical processes").

[58] *See* ACGIG: Industrial Ventilation Manual (1998), p. 3-2.

[59] AP-42 (1995) § 13.2-2.

[60] *See* ACGIG: Industrial Ventilation Manual (1998), p. 4-3.

short, EPA lacks a rational basis in the current record for imposing opacity standards on sources of fugitive grain dust.

Summary of General Flaws in Present Record

In summary, after thorough review of (i) the available documents related to Method 9 and the original grain elevator NSPS and (ii) the record for the instant rulemaking proposal, the Coalition has concluded that EPA has failed to establish a proper basis for the five proposed, non-zero Subpart DDa opacity standards.[61] EPA has failed to (i) validate Method 9 for use in generating reliable data on grain elevator fugitive emissions, (ii) provide in the instant record any emissions data in support of the three original non-zero grain elevator opacity standards, (iii) provide evidence that it followed its own guidance in generating such emissions data as was provided in the record, (iv) assemble sufficiently robust datasets so as to compensate for the many highly variable factors influencing opacity readings for fugitive emissions sources, especially sources of fugitive grain dust; and (v) take the large margins of error that are inherent in Method 9 opacity readings into account in setting the proposed standards. Because of these shortcomings, the data on which the five proposed, non-zero Subpart DDa opacity standards, including the 1978-vintage standards, are based is of unknown accuracy and consistency and, therefore, such data cannot be relied on as the basis for establishing opacity standards for the grain elevator affected facilities on a going-forward basis.

If EPA is to establish lawful opacity standards for grain elevator fugitive sources (*i.e.*, sources of fugitive grain dust), Method 9 must be properly evaluated, adequate guidance must be developed and followed, and a robust database of consistent opacity observations must be created. None of these have been done yet by EPA, making the proposed Subpart DDa fugitive source opacity standards unsupportable. In short, EPA has failed to provide substantial evidence that the proposed fugitive source opacity standards are rational and otherwise compliant with section 111(b)'s design criteria, and therefore, EPA has not crossed the initial "burden of proof" threshold required to establish such standards. The best course for EPA would be to withdraw the instant proposal pending development of an adequate record.

2. EPA Lacks an Adequate Basis for Its Proposed 10 Percent Opacity Standard for Wire Screen Column Dryers.

In addition to, the Coalition's position that regulation of wire screen column dryers under Subpart DDa is wholly inappropriate due to their lack of air quality significance and that Method 9 has not been established as a reliable and consistent means of measuring opacity from fugitive sources at grain elevators, the Coalition also maintains that the 10 percent opacity limit embodied in proposed section 60.302a(a)(3) for such dryers is: (i) based on insufficient data, (ii) possibly unachievable, (iii) unnecessary for those dryers meeting a design standard, and (iv) not a cost-effective means of reducing particulate emissions from this subcategory of grain elevator emissions sources. Each of these points is elaborated below. As these points show, EPA lacks

[61] Likewise for much the same reasons, the Coalition submits that EPA has failed to establish an adequate record for the zero opacity limits as well.

an adequate basis for adopting the 10 percent opacity limit for wire screen column dryers. Such adoption would be indefensible upon judicial review.

There Are Insufficient Data in the Present Record for EPA to Establish an Opacity Standard for Wire Screen Column Dryers.

As described earlier in this section of these comments, EPA has failed to establish the proper foundation for using Method 9 observations as the basis for developing any opacity standards from fugitive emission sources at grain elevators. Beyond that failure, EPA additionally has made specific errors in developing the proposed opacity standards for wire screen column dryers.

In 1978 EPA established, in 40 CFR 60, Subpart DD, performance standards for column dryers.[62] These standards include a design standard or, for units not meeting the design standard, an opacity limit. In developing the Subpart DD standards for column dryers, a total of 126 6-minute opacity observations were made on six column dryers at six facilities.[63] Based on the upper 95 percent confidence limit for the mean of that opacity data, an opacity standard of zero percent was set for column dryers. As an alternative to the opacity standard, an equipment design standard was set for column dryers related to the size of the holes in the perforated plates. The proposed design standard specified a maximum hole diameter in the perforated plates in column dryers of 0.084 inches. As a result of public comments providing additional visible emissions data from other facilities with larger holes in the perforated plates, EPA revised the final design standard to allow a maximum hole diameter of 0.094 inches.[64] This revision to the originally proposed column dryer standards demonstrates the inadequate size of the initial data set of even *126* 6-minute opacity observations upon which the proposed standard was based.

In Subpart DDa, EPA is proposing an opacity limit for wire screen column dryers, which dryers present much the same difficulties in measuring opacity of particulate emissions accurately as do perforated-plate column dryers. As outlined in the preamble of the proposed rule, the proposed opacity standard of 10 percent for wire screen column dryers is based on a total of only 20 6-minute opacity observations made on four dryers, (*i.e.*, 30 minutes of opacity observations on each of the four dryers) or about 16 percent of the number of 6-minute observations that served as an inadequate basis for the 1977 proposed column grain dryer NSPS limits. Even assuming that the wire screen dryer opacity data are valid, this fact alone demonstrates that EPA has insufficient data on which to base a proposed NSPS limit for this type of dryer.

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[62] The term "column dryers" is used here as it is defined at 40 CFR 60.301(m). The Coalition's position, as expressed elsewhere in these comments, is that wire screen column dryers are not "column dryers" as defined at section 60.301(m).

[63] USEPA, Research Triangle Park, NC, Standards Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Grain Elevator Industry, at 5-6 (Jan. 1977) (EPA-450/2-77-001a).

[64] 39 Fed. Reg. at 34342, col. 2.

Also, after reviewing the support document in the docket,[65] which includes the wire screen dryer opacity test reports, the Coalition determined that EPA ignored some of the opacity data collected for Dryer #2 located in Hazen, Arkansas. For this dryer, the highest 6-minute opacity average during Run #1 was 29 percent and the highest 6-minute average during Run #2 was 10 percent. Although there appears to be some confusion in the report regarding the designation of which opacity test was during drying and which opacity test was during filling, EPA decided to exclude some of the results from Dryer #2 altogether, despite the fact that the proposed standard applies at all times including during periods of startup, shutdown and malfunction.

Also, further review of the opacity observations made of the four wire screen dryers in the test report reveals that some of the opacity tests were not even performed in accordance with the requirements of Method 9. The field data sheet used by the contractor entitled *Report of Visible Emissions* provides a source layout sketch that depicts the "Sun Shadow Line" instead of depicting the actual location of the sun with respect to the observer's position. The field data sheets show the "Sun Shadow Line" to be within 140 degrees in front of the observer, implying that the sun is in the 140-degree sector behind the observer. However, this approach makes it difficult to ascertain the position of the sun above the horizon with respect to the observer. The position of the sun is not documented on any of the data sheets. In an attempt to reconstruct the sun position with respect to the observer from these data sheets, it is clear that one dryer test (*i.e.*, the test of Dryer #4) did not meet the requirements of Method 9 as the sun was mostly overhead and in front of the observer rendering this test invalid. In addition, the opacity observations performed on Dryer #2, Run #1were performed between 9:05 and 10:10 AM with the sun marginally on the edge of the 140-degree sector based on the observer's sketch and the sun rising in the East with respect to the North direction arrow.

Taking these defects into account, EPA in effect is proposing a new NSPS opacity limit on a new source subcategory based on a maximum of only 15 potentially valid 6-minute opacity observations performed on three wire mesh dryers, and five of those observations are questionable based on the sun angle. This is clearly an inadequate data set upon which to base new standards, and EPA has made no effort in the record to explain why it is adequate for rational decision-making. The Coalition respectfully urges EPA to withdraw the proposal regarding as to wire screen dryers, or build an adequate record and provide for an additional round of notice-and-comment.

The Proposed 10 Percent Opacity Standard Is Not Achievable in the Case of Wire Screen Column Dryers.

In its review of available opacity data from wire screen dryers, EPA derived the proposed 10 percent opacity limit from examining the results of four of the five available opacity tests (a total of only two hours of data) while ignoring the one opacity test result that exceeded the proposed 10 percent limit. In offering this proposed limit, the preamble to the proposed Subpart DDa states:

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[65] Eastern Research Group, *Evaluation of Revisions to Grain Elevator Emission Standards* (Mar. 2013) (EPA-HQ-OAR-2010-0706-0092).

> Because this limit is achievable by the wire screen column dryers that provided information, and these dryers would be similar or the same as future dryers constructed (i.e., column dryers using 24 mesh screens), we estimated there to be no cost or emission impacts from meeting a 10 percent opacity limit (other than testing, recordkeeping, and reporting costs). [79 Fed. Reg. at 39252-53]

This statement is demonstrably erroneous. One of the four dryers on which the proposed standard is based could not meet the proposed limit[66] under all operating conditions. It is unclear what costs might be required to be incurred to make all dryers compliant, but the cost is clearly not zero. Further, section 111(b) requires EPA to assure that the standards it sets are achievable for all operational modes. *See, e.g., National Lime Ass'n. v. EPA,* 627 F.2d 416, 443 (D.C. Cir. 1980) ("EPA has a statutory duty to promulgate achievable standards. This requires that they approach that task in a systematic manner that identifies relevant variables and ensures that they are taken account of in analyzing test data.").

At present, EPA simply does not have adequate data on which to base an achievable opacity standard for this subcategory of source, particularly one that, as is required, takes variability of emissions into account.[67] And even if its database were adequate, EPA has failed to analyze the available data in a manner consistent with establishing a standard that can be achieved through installation and proper operation of the BESR for this source category.

As for the use of wire screen column dryers for other grains (besides rice), EPA simply has no data on which to base an opacity standard. EPA has acknowledged that:

> [T]he amount of dust emitted during processing of grain in the various affected facilities depends on the type of grain being handled, the quality of grain, and the moisture content of the grain. The emission test information gathered for the 1978 subpart DD proposal indicates that the type of grain processed affects the PM emissions, with one to two orders of magnitude difference in PM emissions between affected facilities processing soybeans and corn (higher emissions) than those processing wheat and milo. [79 Fed. Reg. at 39250 col. 2]

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[66] *See Evaluation of Revisions in Grain Elevator Emissions Standards,* at Appendix C, Table 1.4.2 (Mar. 2013) (EPA-HQ-OAR-2010-0706-0092) (Hazen, Arkansas, Dryer #2, Run #1) (hereinafter, the "*BSER Analysis*").

[67] For example, in establishing a 20 percent opacity NSPS standard for asphalt concrete plants, EPA states: "It was the Administrator's judgment that 15 hours of Method 9 observations on best controlled facilities combined with additional information provided by State and local air pollution control agencies was sufficient justification for establishment of a 20 percent opacity standard." USEPA, Research Triangle Park, NC, *Public Comment Summary: Opacity Provisions Under Standards of Performance for New Stationary Sources of Air Pollution*, at 8 (Aug. 1975). EPA has only a fraction of this amount of data for wire-mesh dryers and has cited no "additional information."

But despite this fact, opacity data from a handful of rice drying operations are being used by EPA to establish opacity standards for an entire class of dryers regardless of the type of grain that would be dried in those dryers. And although wire screen column dryers are most often used for drying rice, they are also used for drying other grains. EPA, therefore, has no basis, and hence no authority, for establishing a broad opacity limit on wire screen column dryers as a subcategory without qualification in regards to the grain being dried. *See, e.g., National Lime,* 627 F.2d at 446-50 (discussing EPA's failures to consider key factors in setting opacity standards for lime production).

The Proposed 10 Percent Opacity Standard for Wire Screen Column Dryers Is Not Appropriate Or Necessary.

In addition to the fundamental flaws in EPA's reasoning in establishing the wire screen column dryer opacity limit at 10 percent, the inclusion of an opacity limit without an alternative design standard on wire screen column dryers results in inequitable treatment of these dryers relative to the treatment of rack and column dryers. The available data and EPA's own analysis support the conclusion that a design standard is a viable and necessary alternative to an opacity limit. Moreover, establishing an opacity standard creates a monitoring, recordkeeping, and reporting burden that provides no environmental benefit for those dryers that can meet a design standard, as explained below.

As stated by EPA in its *BSER Analysis*:

> Therefore, there are no add-on controls that can be applied to control PM emissions from these dryers.[68]

The Coalition agrees with the accuracy of this statement, yet this statement clearly demonstrates why it is appropriate to establish a design standard in lieu of an opacity limit for wire screen column dryers. *See, e.g., Essex Chemical Corp. v. Ruckelshaus,* 486 F.2d 427, 433 (D.C. Cir. 1973) ("An adequately demonstrated system is one which has been shown to be reasonably reliable, reasonably efficient, and which can reasonably be expected to serve the interests of pollution control without becoming exorbitantly costly in an economic or environmental way."). If meeting a design standard is sufficient for perforated plate column dryers, it should also be sufficient for wire screen column dryers.

The Proposed 10 Percent Opacity Standard for Wire Screen Column Dryers Is Not a Cost-Effective Means of Limiting Emissions.

In its *BSER Analysis* EPA states:

[68] *BSER Analysis*, at 8.

> [N]o costs or emission impacts are expected from meeting a 10 percent opacity limit (other than testing, recordkeeping, and reporting costs).[69]

First, the Coalition disagrees with the no-cost premise of this statement because, as described above, the available test data show that the limit is unachievable with the present technology, and therefore considerable costs could be incurred in vain attempts to comply with this unnecessary opacity limit. But even if EPA's view on costs were accurate, the costs of testing, recordkeeping, and reporting are not zero. Yet these burdens provide zero environmental benefit for those dryers that meet a design standard. Thus, for dryers meeting a design standard, the cost-effectiveness of this standard (expressed in dollars per ton of emissions reduced) is infinitely large. Such a standard is wholly inconsistent with the NSPS standard setting process. *See generally National Lime*, 627 F.2d 416.

3. EPA Lacks an Adequate Basis for Its Proposed 10 Percent Opacity Standard for *En-Masse* Barge Unloaders.

EPA also has proposed an opacity standard of 10 percent for *en-masse* barge unloading operations. Here, too, it has done so based on insufficient data collected with an unproven methodology, while having no reasonable expectation that any emissions reductions can be attributed to meeting this standard. Establishing an opacity limit on an inherently compliant technology is unnecessary.[70] Further the cost of conducting the required opacity tests is unjustified.

The Proposed 10 Percent Opacity Standard for *En-Masse* Barge Unloaders Is Based on Insufficient Data.

In its analysis supporting the proposed 10 percent opacity standard for *en-masse* barge unloading operations, EPA reaches the following conclusion:

> The data collected show that the 10 percent opacity limit can be met by affected facilities using the *en-masse* conveyor system to unload barges without using additional control, resulting in no cost or emission impacts for meeting the opacity limit.[71]

This conclusory statement, which serves as EPA's entire basis for a proposed industry-wide opacity limit for a technology that has no means of emissions control associated with it other than the inherent control provided by its design, is based on a total of only two one-hour Method 9 tests at a single barge on a single day unloading a single grain. In fact, the two one-

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[69] *Id*.

[70] This statement is based on the fact that there are no "knobs" that can be turned to affect fugitive emissions resulting from grain unloading using an *en-masse* conveyor system, thereby making the *en-masse* system inherently compliant.

[71] BSER Analysis, at 7.

hour tests were actually conducted over consecutive hours, such that the entire proposed standard is based on 2 hours of Method 9 observations, or 20 6-minute average opacity readings from one barge unloading using an *en-masse* conveyor system. Such paucity of data is completely inadequate to characterize representative variability in emissions due to the wide range of factors that can affect the observed opacity of fugitive grain handling emissions.

In reviewing the actual field data presented in the test report that is included in the *BSER Analysis* document, it is apparent that the observed opacity of the fugitive emissions from barge unloading is highly variable, with individual opacity readings ranging from 0 percent to 25 percent opacity. The maximum 6-minute average opacity is 10, which is the proposed standard. Clearly, any slight variation in the fluctuation of the opacity observations could easily exceed the proposed 10 percent limit even if one assumes that the unloading operation tested is representative of the entire industry.

In addition, the field data sheets from the opacity observations note that the emissions color was light brown during the first hour and light tan during the second hour of observations. Presumably, the barge was unloading the same grain during both hours. It is noted that the second hour of observations occurred from 6 PM to 7 PM and the tests were performed on March 11. It is quite likely that emissions appeared lighter as darkness fell during the observation period, leading to obvious concern about the validity of the observations performed at dusk. Further, the background color during both hours was recorded as dark brown. In either case, the contrast between the emissions and background does not satisfy the EPA's own guidance for developing opacity standards during maximum contrast conditions.[72] As an example, in the preamble to the final version of Subpart DD, EPA states:

> [V]isible emission standards are based on observations recorded by certified observers at well-controlled existing facilities operating under normal conditions. When feasible, such observations are made under conditions which yield the highest opacity readings such as the use of a highly contrasting background. These readings then serve as the basis for establishing the standards. [43 Fed. Reg. at 34343 col. 3.]

The introduction of Method 9 states:

> Under conditions presenting a less contrasting background, the apparent opacity of a plume is less and approaches zero as the color and luminescence contrast decrease toward zero. *As a result, significant negative bias and negative errors can be made when a plume is viewed under less contrasting conditions.*[73]

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[72] See: USEPA, Research Triangle Park, NC, Standards Support and Environmental Impact Statement Volume 2: Promulgated Standards of Performance for Grain Elevator Industry, at 2-9 (Apr. 1978) (EPA-450/2-77-001b); 43 Fed. Reg. 34343; and USEPA, Research Triangle Park, NC, Public Comment Summary: Opacity Provisions Under Standards of Performance for New Stationary Sources of Air Pollution at 24 (Aug. 1975).

[73] See Appendix A-4 to 40 CFR Part 60 (emphasis added).

As a result of the low contrast between the emissions and the background, the apparent low light conditions, and the high variability of the opacity observations from the one *en-masse* barge unloader tested, the data set that EPA used in support of the 10 percent opacity standard is completely inadequate to demonstrate achievability across an entire source subcategory, which would necessarily include variations in grains and operational modes. It is possible – indeed likely – that this source and others in the proposed subcategory will exceed the proposed 10 percent opacity standard on a frequent basis.

Moreover, as discussed previously, EPA has not validated Method 9 for use in evaluating fugitive emissions from grain industry sources. Without proper guidelines and validation, the method cannot be assumed to produce consistent and accurate results. Thus, it is patently irrational for EPA to translate the results of a few tests of questionable quality into a conclusion that the 10 percent opacity limit can be met by the affected facilities *without using additional control*. *See National Lime*, 627 F.2d at 446-50.

EPA has acknowledged previously that uncontrollable factors, such as wind speed, the type of grain, the inherent dustiness of grain, and the moisture content of grain, can affect particulate emissions.[74] Yet, with a test data set that spans a single two-hour period collected while unloading one barge-load of a particular grain, EPA is proposing to establish an opacity standard that it will require the entire universe of potentially affected facilities to achieve. Even if one assumes that Method 9 and the applicable guidance for its use on fugitive sources could actually produce consistent and accurate results, the Coalition maintains that the data simply do not exist in the present record to establish an opacity standard for this type of unloader. For these reasons, the Coalition urges EPA to eliminate the opacity limit for *en-masse* barge unloaders from the final Subpart DDa rule. Assuming it is "appropriate" within the meaning of section 111(b) of the CAA to regulate that subcategory at all (which the Coalition disputes), the appropriate means of regulating emissions from that subcategory to establish this technology as equivalent to a marine leg that meets the ventilation design standards in the proposed rule.

No Emissions Reductions Will Result from the Proposed 10 Percent Opacity Standard for *En-Masse* Barge Unloaders.

EPA's own analysis supports the conclusion that imposing a 10 percent opacity standard on barge unloading operations utilizing *en-masse* conveyors would have no effect on emissions. Reasons for this include:

> Particulate emissions are controlled by the design of the unloader without an add-on emission control system.[75]

And:

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[74] USEPA, Standards Support and Environmental Impact Statement Volume 2: Promulgated Standards of Performance for Grain Elevator Industry, at 2-5 (Apr. 1978) (EPA-450/2-77-001b).

[75] BSER Analysis, at 6.

> All emissions from barge unloading using an *en-masse* drag conveyor are fugitive in nature because they cannot be captured and ventilated to a control device.[76]

Imposing a 10 percent opacity standard on a source of fugitive emissions whose design represents the only means of control equates to establishing a limit on an inherently compliant technology and makes the improbable assumption that all *en-masse* conveyors can comply with the proposed opacity limit regardless of the type or quality of the grain being unloaded or any of the many other variables that can affect opacity from such an operation, all based on two questionable tests from a single unit done late on the same day. Thus, the proposed limit serves no purpose, and EPA has failed to show that it is achievable within the subcategory. EPA's proposal is not the reasoned decision-making required by the CAA, the PRA and E.O. 13563. *See National Lime,* 627 F.2d at 446-50 (discussing EPA's failures to consider key factors in setting opacity standards for lime production).

The Proposed 10 Percent Opacity Standard Is Not a Cost-Effective Means of Limiting Emissions from *En-Masse* Barge Unloaders

The imposition of an opacity standard on *en-mass* conveyors results in compliance costs for monitoring, recordkeeping, and reporting yet the proposed 10 percent opacity limit is not expected to reduce emissions from *en-mass* conveyor operations, as affirmed by EPA analysis:

> The data collected show that the 10 percent opacity limit can be met by affected facilities using the *en-masse* conveyor system to unload barges without using additional control, resulting in no cost or emission impacts for meeting the opacity limit.[77]

There are, however, costs for monitoring, recordkeeping and reporting associated with this requirement. Thus, the cost-effectiveness of this standard (expressed in dollars per ton of emissions reduced) is infinitely large. Such a standard is wholly inconsistent with the CAA's NSPS standard setting process and the PRA, as discussed above.

4. EPA Should Eliminate the Proposed Opacity Standards for Dedicated TSF Unloading Stations

Both EPA's and the Coalition's analysis of the section 114 survey data clearly demonstrate that TSFs are, on average, used less than once per year. At this utilization rate, any requirement that results in application of any emissions limits, controls, and/or monitoring requirements to dedicated TSF unloading stations is unreasonable and therefore beyond EPA's authority under the CAA and the PRA.

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[76] Id.

[77] *Id.*, at. 7.

Consider that a truck unloading station serving a 1 million bushel TSF will emit less than 0.3 tons per year of PM10 and less than 0.1 tons per year of PM2.5.[78] Assuming that a three-sided shed and an active ventilation system is required for this unloading operation to meet the proposed Subpart DDa standards and using EPA's own flawed[79] cost estimates for these items, the control costs for fixed unloading equipment that is dedicated to TSF operations will exceed $100,000 per ton of PM10 controlled.[80] Using the Coalition's estimates of annualized shed and fabric filter costs, which adjust for errors in EPA's analysis (as summarized in Table 6 herein), the control cost for a one million bushel TSF unloading station is estimated to exceed $300,000 per ton. In the Coalition's view, there is no conceivable way these costs can be justified by the environmental benefit that might result from imposing limits or control requirements on an unloading station dedicated to TSF storage units. For this reason alone, EPA must eliminate any requirements associated with unloading facilities that are dedicated to TSFs. They would not reflect the application of BSER. Because of their infrequent use, TSFs are simply too insignificant to warrant regulation. The excessive control and compliance costs, when expressed on a dollars-per-ton -of-emissions-reduced basis, are another indication of the unreasonableness of the control requirements for dedicated TSF unloading operations. For these reasons, the Coalition urges EPA to eliminate any requirements applicable to dedicated TSF unloading operations from any final Subpart DDa rule.

5. Equipment and Work Practices for Ship/Barge Unloading

In proposed Subpart DDa, EPA has subcategorized barge unloading stations into three groups: (1) those using an *unloading leg*, (2) those using an *en-masse* drag conveyor, and (3) all others. EPA is also proposing to define the term *unloading leg* to mean:

> Unloading leg means a device which includes a bucket-type elevator which is used to remove grain from a barge or ship.

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[78] The cited PM10 rate is derived from EPA's analysis contained in the Excel spreadsheet: *EPA-HQ-OAR-2010-0706-0087.xlsx: Emission Reductions*. PM2.5 value is based on emission factors found in AP-42, Table 9.9.1-1. AP-42 is accessible at: http://www.epa.gov/ttn/chief/ap42/.

[79] As discussed earlier in these comments, the Coalition's analysis of EPA's capital costs for a fabric filter include only purchased equipment and they do not include ductwork or installation costs. Also, EPA's capital costs for a 20-foot tall three-sided shed do not account for a shed sized to accommodate straight trucks which are the mode of delivery with the highest dust emissions and which account for the bulk of the emissions in the above estimates. Consequently, EPA's cost analysis significantly underestimates the costs and impacts of the proposed Subpart DDa requirements.

[80] EPA's annualized cost for a three-sided shed and fabric filter system are $12,386.29 and $20,176.97 respectively (*EPA-HQ-OAR-2010-0706-0087.xlsx:Cost Sum)* for a total annualized cost of $32,563.25 while EPA's estimate of emissions reductions for a one million bushel TSF unloading facility are approximately 0.28 tons of PM10 per year, putting the estimated PM10 control costs at $117,091.88 per ton of PM10 controlled. The costs cited here are exclusive of performance testing costs, record keeping and reporting costs, etc., which would add to the annual cost burden of this requirement. Also, for simplicity, the dollars per ton values assume 100% control. Further, the Coalition's review of EPA's cost estimates show that EPA significantly underestimated the annualized costs for a three-sided shed and a fabric filter in this application.

In a prior submittal to EPA, the Coalition provided input demonstrating that Continuous Barge Unloaders (CBUs), which are now in common use for unloading grains from barges and ships, are not *bucket elevators*, as this term was used in Subpart DD, because they are materially different in design and are inherently lower emitting.[81] In fact, the Coalition's research clearly shows that CBUs are, like *en-masse* drag conveyors, unloading systems that are not subject to regulation under Subpart DD. Like *en-masse* drag conveyors, CBUs cannot meet the design standard in the present Subpart DD because they do not have a single bottom pulley. The boom of a CBU can be raised or lowered so as to be placed into a barge at different angles. This is what allows the CBU to unload barges at very different river stages. To achieve this effect, however, CBUs do not have a true "bottom pulley." Instead, CBUs have a set of lower pulleys that maintain tension on the belt and allow the buckets to make proper contact with the grain at different boom angles, as illustrated in Figure 1 *supra*.

As a result of its design, it is technically infeasible for a CBU to be totally enclosed from the top "to the center line of the bottom pulley. Yet, as proposed, Subpart DDa remains silent regarding these types of unloading systems. This omission leads to potential confusion and it should be remedied if EPA proceeds with any final rule.[82]

Furthermore, EPA has no authority to impose the catch-all standard proposed in section 302a(d)(3), which would require the owner or operator of any barge or ship unloading operation not using an unloading leg or an en-masse drag conveyor -- and thus not subject to the standards proposed in section 302a(d)(1)-(2) -- to "use other methods of emission control demonstrated to the Administrator's satisfaction to reduce emissions of particulate matter to the same level or less."79 Fed. Reg. at 39265 col. 3. If a source is subject to a design, equipment, work practice or operational standard promulgated under EPA's authority pursuant to 42 U.S.C. § 7411(h)(1), the owner or operator may petition EPA to permit the use of an alternative means of emission limitation if the owner or operator demonstrates to EPA's satisfaction that it "will achieve a reduction in emissions of any air pollutant at least equivalent to the reductions in emissions . . . achieved under the requirements of paragraph (1)." *See* 42 U.S.C. § 7411(h)(3). However, that an alternative path for establishing an emission limitation does not arise at all unless the source is subject to a design, equipment, work practice or operational standard under § 7411(h)(1) in the first place.

Proposed Subpart DDa thus turns the relevant statutory authority on its head. The enclosure and aspiration standards in section 302a(d)(1) and the opacity standard in section 302a(d)(2) apply *only* to barge or ship unloaders that use a marine leg or *en-masse* drag conveyor. They do *not* apply to other types of unloaders, such as CBUs. Consequently, section 302a(d)(3) would require the owner or operator of a CBU to demonstrate that the CBU employs a means to achieve emission reductions that are equivalent to what the CBU would achieve if it complied somehow with standards were *not* meant for CBUs to begin with.

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[81] *See* RTP Environmental Associates, Inc., *Applicability of and Alternatives to the Current NSPS Subpart DD Barge Unloading Standard* (June 28, 2010) (part of document at EPA-HQ-OAR-2010-0706-0080). The analysis is hereby incorporated into these comments by reference.

[82] In a final rule, EPA should also explicitly address the fact that neither *en-masse* drag conveyors nor CBUs are regulated under Subpart DD.

This not only exceeds EPA's authority under sections 111(b) and 1119h), it is arbitrary and capricious in the extreme. As an initial matter, EPA states that proposed section 302a(d)(3) is "similar" to a provision in Subpart DD, which provides -- in section 302(d)(3) -- that "[r]ather than meet the [aspirated enclosure] requirements of paragraphs (d)(1) and (2) of this section the owner or operator may use other methods of emission control if it is demonstrated to the Administrator's satisfaction that they would reduce emissions of particulate matter to the same level or less." This provision clearly applies *only* to unloaders that *are* subject to paragraphs (d)(1) and (d)(2) in the first place, *i.e*. marine legs. This paragraph, which mirrors 42 U.S.C. § 7411(h)(3), is not similar to and does not justify the catch-all proposed in Subpart DDa.

Moreover, which standard are CBUs supposed to meet? EPA developed the aspirated enclosure standard for marine legs because (a) it is technically feasible for marine legs, and (b) an opacity standard was foreclosed by the wildly variable and sometimes very high opacity emissions observed at marine leg unloading operations employing an aspirated enclosure.[83] Similarly, EPA proposed the 10 percent opacity limit for *en-masse* drag conveyors because the design of the unloader -- the conveyor inlet is buried in the grain being unloaded -- controls PM emissions without an add-on emission control system, which EPA found allows these systems to operate with less than 10 percent opacity.[84] These are fundamentally different standards applicable to fundamentally different unloading systems. To require that a third fundamentally different type of unloading system to meet one or the other of these standards, when marine legs and *en-masse* drag conveyors each cannot meet the other's standard,[85] is fundamentally flawed.

To address these defects in proposed Subpart DDa, the Coalition strongly recommends that EPA expressly exclude from the definition of "grain unloading station, CBUs, *en-masse* drag conveyors and other devices that are not conventional marine leg bucket elevators. This recommendation is consistent with the low emissions characteristics of CBUs and *en-masse* drag conveyors which are inherent in the design of these types of systems. Further, EPA lacks authority to impose an opacity standard on CBUs because there are no data on which to base such a standard.

6. EPA's Proposed Elimination for Purposes of Subpart DDa of the Exemption for SSM Periods Is Unauthorized and Unreasonable, and Therefore Unlawful.

In the instant rulemaking EPA is proposing, for purposes of Subpart DDa (but not Subpart DD) to eliminate the exemption at 40 CFR 60.8(c) for excess emissions resulting from SSM events, an exemption that has been in place for grain elevators for 36 years. EPA proposes to accomplish that elimination by explicitly stating in the section that embodies the newly-constituted PM emissions standards that "[t]hese standards apply at all times." 79 Fed. Reg. at 39264 col. 3 (proposed section 60.302a(e)). EPA is proposing to make this major change even

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[83] *See* Technical Support Document (1977), p. 8-39 (noting opacity emissions as high as 65%).

[84] *See* NPRM, 79 Fed. Reg. at 39251. The Coalition disputes, however, that this limit is based on sufficient data.

[85] *Id*.

though, as required by 40 CFR 60.8(c), the emissions testing data on which those standards are based excluded SSM periods on the ground that they are not representative of normal source operation. EPA, therefore, has no factual basis upon which to conclude rationally that the standards are "achievable" during SSM periods. Achievability is a cardinal requirement of section 111(b), as discussed in the Background section of these comments. *See also Sierra Club v. EPA*, 657 F.2d 298, 330 (D.C. Cir. 1981); *National Lime*, 627 F.2d 416. EPA explicitly admits as much as to startups and shutdowns at grain elevators. *See* 79 Fed. Reg. at 39256 col. 3. And, in discussing malfunctions at length, it implies that they are inevitable at grain elevators and can often result in excess emissions. EPA's proposal clearly is inconsistent with the CAA's design specifications for NSPSs in section 111(b). Moreover, EPA has alternatives available to it that would be fully consistent with the CAA, notably, a design, work practice or equipment standard under section 111(h), 42 U.S.C. § 7411(h), or a numeric standard that employs sufficiently calibrated averaging periods. The Coalition urges EPA to abandon its proposal and to issue a new proposal that offers one of those alternatives. The Coalition believes that a section 111(h) standard could be formulated that would comply with the CAA's design specifications, including the requirement that the standard apply "on a continuous basis." CAA § 302(k), 42 U.S.C. § 7602(k).

EPA claims that its proposal is "consistent with" *Sierra Club v. EPA*, 551 F.3d 1019, 1027 (D.C. Cir.), *cert. denied*, 130 S. Ct. 1735 (2010). But that decision did not involve an NSPS at all. Rather, it concerned an open-ended blanket exemption from applicable category-specific NESHAPs contained in a generic provision in the NESHAPs General Provisions. The court concluded that that blanket exemption did not attempt to reflect the emission limitations achieved by the best-performing sources, as required by CAA section 112(d), and so did not satisfy the CAA requirement that MACT standards be "section 112-compliant" at all times. *Id.* at 1021. The court observed that EPA essentially admitted that the SSM exemption in the NESHAPs General Provisions was not a section 112(d)-compliant emission standard. Nor was it intended to be a work practice standard under CAA section 112(h). *Id.* at 1028.

The *Sierra Club* court did not opine anything about standards of performance under CAA section 111(b) and the requirement of that section that NSPSs reflect the performance *achieved* by demonstrated control technologies. Even more importantly, the decision did not concern whether EPA could apply different emission limitations, even for hazardous air pollutants, during SSM events. Nor did it consider whether EPA could address SSM events through work practice, design or equipment standards. In fact, the decision suggested that the CAA section 302(k) definition of "emission standard," which requires continuous applicability, and the work practice authority in CAA section 112(h), which parallels section 111(h), would allow EPA that discretion to set a work practice, design or equipment standard. *Id.* at 1027-28. Moreover, no court has stuck down EPA's treatment of SSM events in the NSPS context.

In contrast, consistent precedent in the D.C. Circuit requires EPA to set NSPSs that consider the effect on compliance of SSM events. The D.C. Circuit has long recognized that a "technology based standard discards its fundamental premise when it ignores the limits inherent in technology." *NRDC v. EPA*, 859 F.2d 156, 208 (D.C. Cir. 1988). The potential for SSM events is inherent in the technologies used for production and emissions control, including in the grain elevator context. The leading example of such D.C. Circuit decisions is *Portland Cement*

Ass'n v. Ruckelshaus, 486 F.2d 375, 398 (D.C. Cir 1973, a decision reviewing section 111(b) standards. The court recognized that "'start-up' and 'upset' conditions, due to plant or emission device malfunction, is an inescapable aspect of industrial life and that allowance must be made for such factors in the standards that are promulgated." *Id.* at 399. Similarly, in *Essex Chemical Corp. v. Ruckelshaus*, 486 F.2d 427, 432 (D.C. Cir. 1973), another section 111(b) case, the court held that SSM provisions are "necessary to preserve the reasonableness of the standards as a whole." *Id.* at 433. In *National Lime Ass'n v. EPA,* 627 F.2d 416 (D.C. Cir. 1980), the court held that the CAA requirement that NSPSs be "achievable" means that the standards must be capable of being met "under the most adverse circumstances which can reasonably be expected to occur …." *Id.* at 432 n. 46.

Implicitly acknowledging that grain elevators would experience SSM events that result in excess emissions, EPA offers merely the solace that it will exercise prosecutorial discretion appropriately, as follows: "As explained above, if a source is unable to comply with emissions standards as a result of a malfunction, the EPA may use its case-by-case enforcement discretion to provide flexibility, as appropriate." 79 Fed. Reg. at 39257. That is cold comfort. For one thing, the D.C. Circuit has held already that promising enforcement discretion is not an adequate substitute for setting achievable standards in the first place. *See, e.g., Portland Cement,* 486 F.2d at 398 n. 1. Moreover, EPA's exercise of enforcement discretion here does nothing to prevent a grain elevator from having to defend itself from a citizen suit or state enforcement action for the same normally excusable SSM event.

Finally, EPA's claims that the difficulty of formulating a section 111-compliant grain-elevator NSPS that provides for SSM events is so great that it is not worth even trying. First, even if EPA is right, the logic of the CAA calls not for promulgation of an unachievable standard, but instead for an emissions-control requirement that comes as close in effectiveness to the customary, continuously-applicable numeric standard as possible – for instance, a well-crafted design, equipment or work practice standard, which is specifically authorized anyway by section 111(h). But, of equal importance, the record here contains no evidence to support EPA's impossibility claim as it applies in the context of grain elevators; yet EPA clearly has the initial burden of proof. *See National Lime,* 627 F.2d at 432 ("[W]e think an initial burden of promulgating and explaining a non-arbitrary, non-capricious rule rests with the Agency …."). Subpart DDa would address only PM emissions from a limited range of well-understood and relatively simple pieces of equipment and would seek to apply principally a similarly well-understood and simple piece of controls, namely, fabric filter technology. Surely it is possible to craft a reasonably continuous, achievable, enforceable and effective work practice, design or equipment standard in that context. The Coalition believes so, and is willing to work with EPA to develop one.

In sum, the Coalition urges EPA to abandon its proposal as to SSM events and to instead collaborate in developing a section 111(h) standard for grain elevators for SSM events in the context of Subpart DDa, assuming that EPA determines to establish a grain elevator NSPS on a going-forward basis.

7. The Coalition Supports EPA's Proposal for Loading and Unloading of TSFs by Means of Portable Equipment.

EPA has correctly determined that loading and unloading of TSFs via portable equipment should not be subject to any numeric or work-practice standards. The principal reason given for this determination is the lack of technically viable control options for such equipment. The Coalition agrees with EPA's conclusion, but also points out that the insignificant nature of emissions from loading and unloading operations associated with TSFs also supports EPA's position in regards to these emissions sources. For example, the estimated annual emissions from portable unloading equipment associated with a 1 million bushel TSF amount to less that 0.3 tons of PM10[86] and the control costs for this type of facility, if feasible, would exceed $300,000 per ton of PM10 controlled.

8. Mineral Oil Must Not Be Considered as BSER

Use of mineral oil is not proven effective in controlling all fugitive emissions under all circumstances, is costly when effective, cannot necessarily be applied to all grains, and could have grain value implications. For these reasons (discussed further below) the Coalition strongly supports EPA's proposal not to consider mineral oil application to be BESR for grain elevator sources in the proposed Subpart DDa rule.

Mineral Oil Is Not Proven Effective in Controlling All Fugitive Emissions from Grain Elevator Sources and, When Effective, Is Too Costly to Use for This Purpose.

Most fugitive emissions at grain elevators occur during receiving and loadout of grain.[87] Further, studies show that for mineral oil to be most effective, it must be well mixed with grain.[88] Thus, to maximize the effectiveness of mineral oil in suppressing fugitive emissions from grain receiving, it would logically need to be applied to and mixed with the grain off-site (*i.e.*, prior to receiving at an elevator). In many cases, this type of mineral oil application is impractical because of the diverse nature of the grain supply system. And any alternative to this approach would likely involve a costly re-design of receiving operations.

Studies also show that the effectiveness of mineral oil as a dust suppressant declines with time with little control provided after 10 months.[89] As a result, using mineral oil to control fugitive emissions from grain loadout operations could require application of the oil to the grain

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[86] This estimate is derived from EPA's analysis contained in the Excel spreadsheet: *EPA-HQ-OAR_2010-0706-0080.xlsx: Emission Reductions.*

[87] Emissions from other grain elevator sources are not fugitive or are minimal due to the proposed standards.

[88] See for example: *Oil Suppression of Particulate Matter at Grain Elevators*, U.S. EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC; July 1994, p. 3-5.

[89] "Reducing Grain Dust with Oil Additives"; F. S. Lai, et al., TRANSACTIONS of the ASAE; 1981; Page 1628.

shortly before loading.[90] While high control efficiencies are possible for this specific fugitive source provided good mixing can be achieved upstream of the loadout point, EPA's analysis shows that the fugitive emissions from loadout activities regulated under proposed Subpart DDa standard are quite low without the use of mineral oil. So mineral oil application for this purpose provides little emissions reduction. However, mineral oil application entails significant cost. Specifically, based on EPA's analysis of controlled loadout emissions under Subpart DDa, loadout emissions are less than 0.2 tons per 10 million bushels of throughput.[91] But the cost of mineral oil alone, applied at a rate of 0.2 weight percent, for this same 10 million bushels of throughput would be approximately $57,000.[92] Thus, the control costs of applying mineral oil in this instance would be in excess of $280,000 per ton of emissions reduced. This cost is clearly "exorbitant" and therefore at odds with the section 111(b)'s design specification for basing an NSPS on BSER.

Mineral Oil Can Adversely Affect
the Characteristics and Value of the Grain.

Soybeans that are treated with mineral oil and are subsequently exported to the European Union may yield soybean oil having hydrocarbon levels in excess of a FEDIOL code of practice of 300 ppmw.[93] Coalition members also have indicated that applying mineral oil to wheat may have detrimental impacts on milling operations.

D. <u>Compliance Assurance Measures: Performance Testing, Parameter Monitoring, Record Keeping and Reporting</u>

1. Introduction

EPA's proposed Subpart DDa contains new requirements for opacity and PM emissions testing and inspections, as well as recordkeeping and reporting. *See, e.g.,* 79 Fed. Reg. at 39248 cols. 1-2. Assuming EPA has authority under section 114 of the CAA to impose such measures by means of an NSPS at all, that authority covers only the imposition of measures that are "reasonable," including cost-effective. CAA § 114(a)(1)(G), 42 U.S.C. § 7414(a)(1)(G). EPA did not provide the necessary analysis to demonstrate the reasonableness under the CAA of its proposed new compliance assurance requirements. Further, EPA likewise failed to show that the proposed new compliance assurance requirements would satisfy the PRA's requirements that

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[90] The residence time of grain in an elevator varies but can be as much as several months. So the best means of reducing fugitive loadout emissions would involve application of mineral oil shortly before the grain is loaded into transport vehicles.

[91] Based on EPA's emissions model found at *EPA-HQ-OAR-2010-0706-0087 - RTP calcs.xlsx: Emission Reductions*.

[92] This cost is based on a mineral oil density of 6.7 pounds per gallon, a mineral oil price of $3.5 per gallon and a grain bulk density of 54 pounds per bushel.

[93] The EU Oil and Proteinmeal Industry is known as FEDIOL. Part of its code of practice states "that any detection of a level [of mineral oil] above 300 mg/kg shall mean that the [vegetable] oil shipment concerned is considered to be contaminated by mineral oil." The code also states: "If the further analysis reveals a contamination by external mineral oil, the vegetable oil of the shipment concerned shall not enter the EU feed or food chain."

new levels of information collection be necessary, useful as a practical matter, and minimized. In the paragraphs below, the Coalition first addresses EPA's overarching failure to meet its burden of showing that the new requirements are reasonable within the meaning of the CAA and necessary, useful and minimized within the meaning of the PRA. The Coalition then addresses at a more specific level the reasonableness of the proposed compliance assurance measures. In addition, the Coalition responds to EPA's solicitation of comment on the use of Bag Leak Detection Systems (BLDS) as a means of assuring compliance with PM standards and addresses certain other issues.

2. Failure to Justify the Addition of New Compliance Assurance Measures

For 36 years, Subpart DD by cross-reference to 40 CFR §60.8 has required owners and operators of affected grain-elevator facilities to conduct only "initial" (*i.e.*, upon initial startup) performance testing to show compliance with Subpart DD's PM emissions and opacity standards, provide the associated notifications, and perform the associated reporting and recordkeeping. *See* 40 CFR §60.303. At the same, however, Subpart DD's standards clearly impose an enforceable obligation to remain in compliance continuously, putting aside periods of startup, shutdown and malfunction. *See id.* §60.302. Subpart DD thus activates and brings to bear the entire apparatus of federal enforcement by EPA and citizens under the CAA, together with the separate but comparable apparatus of state, tribal and local enforcement where EPA has delegated administration and enforcement of Subpart DD to those non-federal agencies and/or where those agencies have adopted Subpart DD or comparable rules into their own legal systems. In both cases, that apparatus includes ready access to courts and programs for surveillance, inspections and data collection, including the power to require additional post-startup performance testing. Moreover, the CAA's system of operating permits, the blueprint for which is in Title V of the CAA, greatly enhances compliance assurance in the grain-elevator world, where applicable. Finally, the new source permitting system under the CAA operates typically to impose either major-source or minor-source permits on new, modified or reconstructed Subpart DD-affected grain-elevator facilities, thereby also enhancing compliance assurance. In short, grain elevators operate already under a robust system of laws and enforcement programs that provide society with a high level of compliance assurance. That system has been in place for three and a half decades without EPA publically expressing a need for change, until now.

As detailed at various points in this statement, the CAA and the PRA impose on EPA a duty to establish a factual and analytical record adequately justifying its rulemaking actions under sections 111(b) (NSPS provisions) and 114 (information collection). With respect to new compliance assurance measures, the burden is on EPA initially to establish a record showing that the measures are reasonable within the meaning of section 114, including cost-effective, and necessary, useful as a practical matter and minimized within the meaning of the PRA. Absent such a record, the new measures would be arbitrary and capricious, and the reviewing court would be obliged to reject them.

Here, EPA is proposing to impose new compliance assurance requirements, namely: additional periodic performance testing, visual inspection, and associated notifications, reporting and recordkeeping. *See e.g.*, 79 Fed. Reg. 39255 cols. 1-2 and 39264-65. EPA, however, has failed to establish in the rulemaking record an adequate factual and analytical justification for the addition of these proposed requirements.

After searching through the preamble to the instant proposal, the underlying technical support documents, and the *Supporting Statement* for the relevant ICR, the Coalition has been able to find only one statement by EPA that offers a basis for adding the new compliance assurance measures to Subpart DDa. According to EPA, that basis is its "understanding that equipment need [*sic*] to be periodically maintained and checked for operational performance to ensure compliance with the emission standards." 79 Fed. Reg. at 39255 col. 1. That "understanding," however, is not a sufficient justification. That is principally because it begs the question of whether the existing federal and state/local compliance assurance system for grain elevators, as outlined above, already is sufficient to cause owners and operators of grain elevators to conduct the inspections, parameter monitoring and maintenance necessary to assure compliance on a continuous basis. To answer that key question rationally, EPA would have to examine, and build a factual record around, the efficacy of the existing system as it specifically affects grain elevators. Then to impose new requirements, EPA would need to explain, on the basis of that record, specifically how the existing system is not adequate and how the new requirements would cure that deficiency in a reasonable (including cost-effective) and minimal, way in accordance with the CAA and the PRA. Absent such a record and explanation, the proposed compliance assurance measures would be arbitrary and capricious.

Under present circumstances, EPA would have an especially difficult time demonstrating that the compliance assurance measures it has proposed are reasonably cost-effective. As discussed above, EPA's analysis (*i.e.*, its *Impact Analysis*) of the incremental benefits and costs of proposed Subpart DDa, as against the baseline of Subpart DD, shows that the requirements proposed as new additions, the bulk of which are the compliance assurance measures, would accomplish only a 31 TPY annual reduction in PM10 emissions at a cost of roughly $30,000 per ton. Such a small reduction for such a high price is not reasonable. It is difficult to see, given EPA's own analysis, how EPA could ever justify the added compliance assurance measures because it has implicitly already established that they make little difference in the area of emissions reductions.

For the foregoing reasons, the Coalition requests that EPA abandon any further effort to establish new compliance assurance measures for the grain elevator NSPS or at least postpone any such efforts until it has established the necessary record to support such measures.

3. *Annual* Method 9 Test for Opacity

EPA is proposing annual Method 9 opacity tests for each affected facility at a cost of $2,540 per test according to EPA's *Impact Analysis*. It is the experience of Coalition member companies that dust emissions caused by poor fabric filter operation will be detected during routine visual emission checks, which EPA is proposing to require on a weekly basis. Thus, the proposed requirement of annual Method 9 opacity tests, which is also aimed at detecting operational problems, would be duplicative of the weekly emission checks and therefore unnecessarily burdensome and unreasonable.

Assuming EPA is able to establish an adequate record to support additional compliance assurance measures at all, the Coalition asks that EPA require the installation and routine monitoring of differential pressure gauges on baghouses as an alternative to annual Method 9 tests. A combination of weekly visual checks and differential pressure monitoring would

accomplish the intended purpose of compliance assurance by ensuring quicker detection of fabric filter leaks than *annual* Method 9 opacity tests, and would do so in a much more cost-effective manner. The Coalition obtained a quote of $707 from Schenck Process, LLC for a differential pressure gauge with a NEMA 4 rating. That cost level is obviously much less that the cost of emissions testing. Scaling the compliance assurance measures back to visual checks and monitoring of differential pressure is consistent with the PRA's insistence on minimizing the information collection burden and potentially consistent the CAA's requirement for reasonable measures. If EPA is fixed on imposing some level of emissions testing, it should do so, not via the NSPS, but instead via Section 114 requests for Method 9 testing, as circumstances warrant.

Further, the Coalition is aware that a developing trend in the construction of new grain elevators is to install a number of small dust filters in lieu of a single large filter, in part to reduce the amount (and cost) of ducting, hoods, and fans associated with a larger central filter system. This trend would result in even greater per facility compliance costs in the future if the proposed annual Method 9 opacity tests were required in the final Subpart DDa rule. Thus, the Coalition sees increased future justification for the use of more cost-effective compliance assurance mechanisms, such as differential pressure gauges in combination with the proposed weekly visual checks, rather than the more costly annual Method 9 tests.

Lastly, the Coalition urges that the combination of opacity standard and periodic testing should not be used at all to regulate the risk of PM emissions from "grain handling operations" that are fully enclosed. A fully enclosed "grain handling operation" by design is not expected to have any emissions, and enforcement simply by checking design and actual construction is fully adequate. The use of an opacity standard plus associated testing and paperwork would be wasteful and unreasonable.

The Coalition proposes that EPA define the term "fully enclosed" to mean:

> a grain handling operation that is inside an enclosure that is designed such that it contains no openings through which dust can escape directly to the atmosphere. Openings for aspiration are not considered to be openings through which dust can escape to the atmosphere.

Performing opacity observations on fully enclosed equipment is not a productive use of resources. Specifically, since (i) the fundamental purpose of NSPS opacity standards is to ensure equipment is functioning properly and (ii) fully enclosed equipment has no means of functioning improperly, imposition of an opacity standard on such equipment is unwarranted. This proposed limit is yet another example of a requirement with an infinitely high control cost effectiveness. The limit is not lawful under section 111(b), and the paperwork associated with it is not approvable under the Paperwork Reduction Act.

4. Method 5 or Method 17 Test Every Five Years for PM

EPA is proposing Method 5 or Method 17 tests for particulate matter every five years for each affected facility at an estimated cost of $12,192 per test according to EPA's *Impact Analysis*. As discussed above, however, EPA has failed to establish a record justifying that cost under the CAA and the PRA, and it is not likely to be able to establish such a record. Due to the

high cost of Method 5 and Method 17 testing and to fulfill the intended purpose of compliance assurance, the Coalition urges EPA to remove its proposal to require such testing every five years and instead rely on the current initial performance tests, regular visual inspections and maintenance thereafter, and use of Section 114 requests for Method 5 or Method 17 testing, as needed.

Further, the combination of weekly visual checks and differential pressure gauges will ensure that good operation and maintenance practices are applied in a more reasonable and cost-effective manner than Method 5 or Method 17 tests. Method 5 or Method 17 tests would provide limited and untimely additional compliance assurance yet impose a heavy cost.

5. Baghouse Inspections Every Six Months

EPA is proposing baghouse inspections every six months. In lieu of this requirement, the Coalition proposes a one-year interval between visual baghouse inspections. It is the experience of Coalition member companies that weekly visual emission inspections in combination with filter differential pressure monitoring make more frequent visual baghouse inspections unnecessary. Performance problems identified and corrective actions taken through routine observations and parameter monitoring will result in timely repairs to malfunctioning equipment, making six-month inspections unnecessarily redundant. Moreover, annual visual baghouse inspections and subsequent reporting would have more integrity under the PRA because the information collection would be minimized to the extent possible.

6. Storage Capacity and Throughput for Each Building, Bin, Silo and Temporary Storage Facility Used to Store Grain

EPA is proposing storage capacity and throughput records and reporting for each building, bin, silo and temporary storage facility (TSF) used to store grain. This requirement would prove overly burdensome and potentially impossible for grain elevators to satisfy. The proposal for monitoring throughput on each individual building, bin, silo and TSF is infeasible due to intra-facility movement of grain. Grain elevators frequently move grain within facilities for various reasons, to include but not limited to drying, blending and load out. The grain elevator industry is not equipped to track the intra-facility movement of grain and such tracking would, in many cases require the installation of additional monitoring equipment. Since it is unclear what purpose such monitoring serves other than for information collection, it is unreasonable under CAA section 114 and the PRA.

At most, EPA should require aggregated records and reporting of storage capacity and throughput for a grain elevator's permanent buildings, bins and silos. Similarly, the Coalition urges that EPA instead require aggregated records and reporting of storage capacity and throughput for all of a grain elevator's TSFs. The grain elevator industry is equipped to track and record grain that enters and leaves grain elevators, but is not equipped to track and record the movement of grain within the elevators.

7. Matching Requirements for Testing, Inspection, Recordkeeping, and Reporting

To the extent that EPA may change testing and inspection requirements in the proposed rule based on the Coalition's recommendations, the Coalition requests matching changes to recordkeeping and reporting requirements.

8. Bag Leak Detection Systems (BLDS)

The Coalition appreciates EPA's request for comment on whether to require BLDS. The Coalition would support the use of weekly visual emission inspections as a more cost-effective method than BLDS for detecting baghouse malfunctions. In the proposed rule, EPA estimates the capital cost of a BLDS to be $24,000. In addition to the initial capital cost of a BLDS, there would also be substantial costs involved to install and perform maintenance on a BLDS. Further, members of the Coalition have experimented with BLDS and attest that BLDS can be unreliable and deliver false-positive detections.

If EPA believes weekly visual inspections of baghouses are insufficient as a method of detecting baghouse leaks, the Coalition proposes the use of differential pressure monitoring in place of BLDS. Differential pressure gauges provide a more cost-effective method than BLDS for detecting leaks. A combination of weekly visual emission inspections and differential pressure monitoring would provide adequate compliance assurance at a substantially lower cost than BLDS. The imposition of BLDS is unsupportable under the CAA and PRA.

9. Continuous Opacity Monitor

The Coalition strongly supports EPA's proposal to *not* require continuous opacity monitors as a compliance assurance measure. Currently under subpart DD, grain elevators are required to conduct an initial PM and opacity performance test, but are not required to perform follow-on testing to demonstrate continuous compliance, except as required by agencies on a case-by-case basis. In its proposal, EPA would require that operators perform weekly visual emissions checks on affected facilities and maintain records of these checks, including any corrective action taken as a result of visible emissions. It is the experience of Coalition member companies that visual emission checks and subsequent corrective action taken as a result of visible emissions ensure emission control systems at grain elevators are properly maintained over time and ensure continuous compliance with standards.

10. Testing Frequency

In sections 60.303a(d)(1) and 60.303a(d)(2), the testing frequency for Method 9 and Method 5 are described respectively as follows (emphasis added):

- §60.303a(d)(1): "…testing for opacity must be performed annually. … Subsequent performance tests must be conducted at intervals *no longer than* 12 months following the previous periodic performance test."

- §60.303a(d)(2): "…testing…must be conducted *no later than* 60 months after the initial performance test…Subsequent performance tests must be conducted at intervals *no longer than* 60 months following the previous periodic performance test."

When it is thus used to describe interval periods between tests, the "no later/longer" requirement works poorly in the agricultural context, and therefore is unreasonable under section 114 of the CAA and unjustifiable under the PRA, The "no later/longer" requirement is functionally equivalent to "no less than". In the case of grain elevators, stack tests are scheduled typically for those times when throughput at the tested "affected facility" can be maintained at or near maximum capacity. For many elevators, this means that testing needs to happen during harvest periods. However, harvest periods vary considerably from year to year, and this variation could easily result in a facility conducting testing early one year (August, for example) and then be faced with a late harvest (for example, October-November) in a subsequent year that would preclude testing 'no longer/later' than the requisite 12 or 60 months.

The proposed solution would be to have subsequent testing required every calendar year (or every calendar five years), but "no earlier than 6 (or 54) months from the previous test and no longer than 18 (or 66) months from the previous test." This formulation would allow the basic requirement for testing "annually" and "every 5 years" to be met, while at the same time providing the flexibility that grain elevators need to deal with annual variations in harvest periods.

This same concept should also be applied to section 60.304a(b) so that the inspection of fabric filters occurs "every 6 months" (or every 12 months as the Coalition's comments advocate) in place of 'no later/longer than 6 months.' This would avoid a situation where an agency could claim a potential violation if the facility inspected the fabric filter on the 12th day of a given month and then the next inspection did not occur until the 14th day of the month, either six months or 12 months later.

11. Performance Test Results Must Be Submitted Using Electronic Report Tool

In section 60.306a(a), facilities are required to use EPA's Electronic Reporting Tool to record performance test data. This would be a new requirement for affected grain elevators and according to EPA information collection request number 1130.10, NSPS for Grain Elevators, Subpart DD, only an estimated 10 percent of the respondents to the recordkeeping and reporting requirements for grain elevators use electronic reporting. Given the low adoption rate of electronic reporting by respondents, it may be fair to assume the electronic reporting tool is not user friendly and would require grain elevators to seek training on the use of the tool. At a minimum, the electronic reporting tool represents an unneeded duplicative recording effort that adds to their recordkeeping and reporting burden. This proposed requirement represents an additional cost with no associated gain in compliance assurance.

12. Summary

EPA's proposed Subpart DDa contains additional compliance assurance measures that are indefensible at present because EPA has failed to establish an adequate record to support

them. Moreover, it is unlikely, given the small incremental benefit EPA has identified, that EPA could ever establish such a record.

For the reasons articulated herein, the Coalition urges EPA to abandon the proposed additions or at least postpone adding the measures until it has established the necessary record. In the event EPA decides to finalize at least some additional compliance assurance measures, the Coalition requests the use at most of weekly emission inspections and the installation and monitoring of differential pressure gauges on baghouses in place of annual opacity and every five-year PM testing to ensure more timely compliance assurance and at a lower cost. The Coalition also urges that EPA require aggregated records and reporting of storage capacity and throughput for its bins, silos, and buildings and for its TSFs, rather than requiring records and reporting for each individual bin, silo, building, and TSF. Further, BLDS are unnecessary, trouble-prone, and not cost-effective as a means of assuring compliance with PM standards. Finally, the Coalition asks that EPA cure the problems that arise in the agricultural sector with the use of the "no later/longer" language and to allow grain elevator owner/operators to choose the method of reporting that best suits their operation.

VI. FAILURE TO PERFORM A FULL ECONOMIC IMPACT ASSESSMENT

For purposes of the instant rulemaking proposal, EPA has taken several positions on the issue of whether and to what extent it is obliged to prepare and place in the rulemaking record an analysis of the costs, benefits and economic impacts associated with the proposed rules. **First**, EPA expressly determined that the instant rulemaking is not a "significant regulatory action" under E.O. 12866, 58 Fed. Reg. 51735 (Oct. 4, 1993), and therefore that it is not required by that order to prepare and publish a full regulatory impact assessment. *See* 79 Fed. Reg. at 39261 col. 1. EPA, however, did not state its reasons for that conclusion. **Second**, in the same passage, EPA also determined that, because the rulemaking is not subject to the requirements of E.O. 12866, it is also not subject to E.O. 13563, which order is discussed early in these comments. EPA did not explain its reasoning for that conclusion either. **Third**, in the rulemaking proposal, EPA made no mention of section 317 of the CAA That section requires EPA to prepare an in-depth economic impact assessment of a proposed revision to an NSPS if EPA determines that the revision is "substantial." Nowhere in the proposal package did EPA make that determination expressly. **Finally,** EPA nonetheless did prepare an assessment of the *incremental* costs to the grain elevator industry, and *incremental* emission reductions, attributable to the requirements of proposed Subpart DDa that are additional to the requirements in current Subpart DD. That assessment, which took the form of EPA's *Impact Analysis*, did not examine the costs, benefits and economic impact associated on a going-forward basis with all of the requirements of Subpart DDa, including the current requirements of Subpart DD. EPA did not explain why it limited its assessment to those incremental costs and emission reductions.

In response to those positions, the Coalition has several comments, as follows:

First, EPA's failure to offer any explanation for its conclusion that the rulemaking is not "significant" under E.O. 12866 makes the conclusion arbitrary and capricious. It is far from obvious that the rulemaking is not "significant." EPA has not made even a preliminary assessment of the economic impact of *all* of the requirements of proposed Subpart DDa, and so it

is not in a position to say that the annual impact is less than $100 million. (See the definition of "significant regulatory impact at section 3(f) of the Order.) Also, EPA has not assessed whether the rulemaking would "adversely affect in a material way … a sector of the economy …." The full complement of Subpart DDa's requirements arguably do impact the grain elevator sector adversely in a material way, especially because, on a going-forward basis, (i) grain elevators are no longer environmentally significant and hence a NSPS is unwarranted and (ii) the costs of control vastly exceed the value to society of the emission reductions produced by the proposed NSPS. Moroever, EPA has not assessed whether the rulemaking raises "novel legal or policy issues", which is another element of the definition of "significant" in E.O. 12866.

In the Coalition's view, the rulemaking certainly does raise such issues. For instance, to the best of the Coalition's knowledge, this is the first time that EPA, in conducting the "review" of an NSPS that section 111 requires, has had to face strong industry claims that the source category is no longer "significant" nationally and that, therefore, the relevant NSPS should be discontinued going-forward. EPA's action on that claim is precedential for the NSPS program and for effective implementation of E.O. 13563, which is aimed at weeding out regulations that are outmoded and unduly burdensome. Similarly, the Coalition's comments call into question what factual and methodological bases EPA must have to establish opacity standards for fugitive emissions lawfully. Opacity standards are a key tool in EPA's regulatory tool box. Other examples include EPA's harsh treatment of SSM events, and the addition of costly, but marginally productive compliance assurance measures, all in the context of the statutorily-required "review" of a longstanding NSPS.

Second, with respect to the applicability of E.O. 13563 to the instant rulemaking proposal, EPA's position in the *Federal Register* notice for that proposal must be seen as erroneous. As detailed at the front end of these comments, EPA already has listed the grain elevator NSPS as a top candidate for discontinuance under that order and that listing remains in effect and necessarily a subject of this "review." E.O. 13563 still applies even if EPA is not required by E.O.12866 to prepare a full regulatory impact analysis for the instant rulemaking proposal.

Third, although EPA did not expressly determine that the instant rulemaking is "substantial" within the meaning of section 317, it implicitly determined as much by voluntarily undertaking an analysis of the incremental costs and benefits of the additional requirements in proposed Subpart DDa. If those incremental costs and benefits are weighty enough to prompt EPA to undertake that analysis, then the costs and benefits, and the economic impact, of all of the requirements of proposed Subpart DDa must be "substantial." EPA cannot escape its obligations under section 317 merely by being silent about the size of the impact of all of those requirements on a going-forward basis. EPA's focus merely on incremental impact thwarts the purpose of section 317, which is to expose and ventilate the true impact of a proposed rule on a going-forward basis. And, here, it is very likely that a comprehensive assessment under section 317 would reveal that the costs and net negative economic impacts of proposed Subpart DDa far outweigh any emission reduction benefits. Section 317, as well as E.O. 12866, place a responsibility on EPA to determine through factual and policy analysis, at least preliminarily, whether that is or is not the case.

Finally, EPA's decision to focus only on the incremental costs and benefits of Subpart DDa strongly suggests that the Agency assumes that the continued operation of an existing NSPS is not at issue in a "review" under section 111(b). But obviously it is. In effect, the "review" process reopens the record behind the original rulemaking so that a proposal to continue the NSPS in effect on a going-forward basis is a new proposition, requiring the full analysis and support that an original NSPS rulemaking would require. This is especially true in the context of E.O. 13563 and the Paperwork Reduction Act (PRA). In short, section 111(b), section 317, E.O 12866. E.O. 13563, and the PRA work together to require an entirely fresh assessment of whether Subpart DD should continue in effect, a direct determination on that issue, and a full justification to support the determination. If EPA fails to carry those burdens, then it may not allow Subpart DD to continue.

The Coalition respectfully requests that EPA prepare, publish and seek comment on a full regulatory and economic impact analysis of all of the proposed requirements of Subpart DDa on a going-forward basis. To allow that to happen, EPA should withdraw or postpone the present proposal, as discussed more fully below.

VII. WITHDRAWAL OF INSTANT PROPOSAL

For the following reasons, the Coalition respectfully urges EPA to withdraw the instant proposal pending further work with such withdrawal to have the effect of removing July 9, 2014, as the dividing line between "new" and "existing" units.

A. Background

Once EPA has published a rulemaking proposal reflecting the periodic "review" contemplated by section 111(b) of the CAA, that same section requires EPA to take final action on the proposal within one year after such publication, an historically tight schedule for NSPS rulemakings. Section 111(a)(2) then defines "new source," *i.e.*, the universe of pollutant-emitting equipment potentially subject to the revised NSPS at issue. A "new source" in the NSPS context is any "affected facility" on which construction, modification or reconstruction is "commenced" after the publication date of the rulemaking proposal, here July 9, 2014.

That tight (one-year) schedule implies that Congress envisioned, as a "new source" triggering event, a proposal that is sufficiently well-reasoned and well-substantiated to withstand vigorous challenges during the comment period and thereby mitigate the risk of substantial delay in formulating responses, substantial change in content, or both. Congress plainly wanted to limit the exposure of "affected facilities" to the uncertainty as to timing and outcome that is engendered by basing applicability on the proposal date, as opposed to the final promulgation date. Indeed, as discussed in an earlier section of these comments, retrospective application of costly control requirements is not favored under federal jurisprudence.

Also, Congress in the CAA did not expressly constrain, in the case of NSPS rulemakings, the normally broad discretion that EPA enjoys to manage the steps and timing of CAA rulemakings in general, thereby implying that EPA has the power to withdraw, or suspend and then restart, a rulemaking proposal.

Importantly, EPA has adopted these readings of congressional intent on at least two occasions, the first in 1978 and the second this year, a span of almost three and a half decades.

In 1978, in the rulemaking that produced the present NSPS Subpart DD, EPA suspended the original (June 1977) proposal because of the large number of comments and substantial controversy that the proposal had stimulated and then reinstated it as of the date of final promulgation. *See* 43 Fed. Reg. 34349 (Aug. 3, 1978). EPA explained: "This action was necessary to avoid creating *legal uncertainties* for those grain elevator operators who might have undertaken various expansions or alternation projects before promulgation of final standards." *Id.* at 34349 col. 1 (emphasis added). EPA apparently concluded that the statute (1) allowed owners and operators to suffer under some such uncertainty, but not an unreasonable amount, and (2) granted EPA latitude to decide how much uncertainty is too much and then take action to avoid it.

For much the same reasons, EPA early in 2014 withdrew its April 2012 proposal of an NSPS for GHG emissions from new electric generating units (EGUs) and at the same time published a new and materially different NSPS proposal aimed at the same emissions and sources. *See* 79 Fed. Reg. 1352 (withdrawal) and 1430 (new proposal). EPA explained that the 2012 proposal was very controversial, stimulating an unusually large number of comments, and that some of the comments had caused EPA to change its mind on certain legal and technical matters. According to EPA, "[t]he changes not only affect determinations of potentially covered sources but could also result in substantial changes in what some sources must do to comply with the standards …." *Id.* at 1352 col. 1. That meant, according to EPA, that those sources could have to "alter planned facility designs or technological control systems." *Id.* In other words, in EPA's view, the 2012 proposal turned out to be so flawed that companies who made investment decisions on the basis of it should not be put at risk of having to comply with outcomes from the newly-started rulemaking that could materially harm those investments.

B. Reasons for Withdrawal

The instant rulemaking proposal does not comport with the vision that Congress had in section 111, and that EPA adopted, for the level of substantive strength that would justify burdening post-proposal investment decisions with the uncertainties inherent in the rulemaking process. The record that EPA has compiled so far in the instant rulemaking is insufficient to support *each* of the key components of Subpart DDa, namely: (i) the threshold determination that grain elevators present a significant risk to human health and welfare nationally, (ii) the new applicability criteria, (iii) the opacity standards themselves and their application to malfunction events, (iv) the compliance assurance measures, and (v) the overarching confidence that benefits justify costs. The proposal is not sufficiently well-reasoned and well-substantiated to withstand vigorous challenge, as detailed above. Congress would not want EPA to continue with the present rulemaking, without releasing post-proposal projects from being classed as "new sources." The Coalition respectfully urges EPA to withdraw the July 2014 proposal, pending development of an adequate record.

VIII. MISCELLANEOUS

The Coalition endeavored to respond to each of the requests made by EPA in the proposal for comment on a particular issue. Attached as Attachment E is an inventory of those requests. It shows the sections of this comment letter where the Coalition responded to the requests.

IX. CONCLUSION

For the foregoing reasons, the Coalition respectfully requests that EPA withdraw the present proposal for lack of an adequate record. If EPA nonetheless proceeds to final action, the Coalition further requests that EPA discontinue the application of an NSPS to grain-elevator "affected facilities" on which construction, modification or reconstruction commences in future. If EPA declines that request, then the Coalition has a range of further requests relating principally to the applicability provisions and substantive requirements of proposed Subpart DDa, as detailed above.

The undersigned members of the Coalition appreciate the opportunity to comment on this proposal. If you have any questions, please contact the Coalition's Chair, Jess McCluer (National Grain and Feed Association) at (202) 888-1102 or jmccluer@ngfa.org. Thank you.

Corn Refiners Association

National Council of Farmer Cooperatives

National Grain and Feed Association

National Oilseed Processors Association

North American Millers' Association

USA Rice Federation

Attachments

NSPS SUBPART DD COALITION COMMENTS ATTACHMENTS

Attachment A: U.S. Grain Storage Capacity and Grain Supply **(Not in Docket)**.....**1**

Attachment B: *Applicability of and Alternatives to the Current NSPS Subpart DD Barge Unloading Standard* (June 28, 2010). **(Not in Docket)** **3**

Attachment C: *Column Grain Dryers Using Woven-Wire Screens as the Column Walls* (June 15, 2010). **(Not in Docket)** **7**

Attachment D: Coalition's submittal to EPA - *Methods for Evaluating the Significance of Temporary Storage Capacity* (November 8, 2012). **(Not in Docket)** **14**

Attachment E: List of EPA Requests for Information in Proposed Revisions to NSPS Subpart DD and DDa. **(Not in Docket)** **21**

Attachment A

Attachment A: U.S. Grain Storage Capacity and Grain Supply 1/

Year	Number of Off-farm Storage Facilities	Off-farm Storage Capacity	On-farm Storage Capacity	Total Storage Capacity	Off-farm Capacity as Share of Total Capacity	Sep. 1 Beg. Stocks 2/	Production 2/	Imports 2/	Supply 2/	Supply as % of Capacity
		---------Billion Bushels---------				----------Billion Bushels----------				
2020F	NA	NA	NA	NA	NA	3.5	21.3	0.4	25.2	NA
2019F	NA	NA	NA	NA	NA	3.7	21.0	0.4	25.1	NA
2018F	NA	NA	NA	NA	NA	3.9	20.8	0.4	25.1	NA
2017F	NA	NA	NA	NA	NA	4.1	20.6	0.4	25.1	NA
2016F	NA	NA	NA	NA	NA	4.1	20.6	0.4	25.1	NA
2015F	NA	NA	NA	NA	NA	3.4	20.8	0.4	24.6	NA
2014E	NA	NA	NA	NA	NA	3.5	21.5	0.4	25.5	NA
2013	8,783	10.4	13.0	23.4	44.5%	3.2	20.4	0.5	24.1	100.8%
2012	8,801	10.3	12.9	23.2	44.3%	3.7	17.1	0.5	21.2	89.2%
2011	8,899	10.1	12.8	22.9	44.2%	3.9	18.3	0.3	22.5	96.8%
2010	8,991	9.7	12.5	22.3	43.7%	4.8	19.1	0.3	24.2	107.3%
2009	9,042	9.5	12.3	21.8	43.6%	4.5	19.9	0.3	24.7	112.1%
2008	9,034	9.4	12.0	21.4	43.8%	4.1	18.8	0.3	23.3	107.3%
2007	9,165	9.1	11.8	20.9	43.4%	4.0	19.0	0.4	23.4	110.2%
2006	9,300	8.8	11.6	20.3	43.1%	4.7	16.5	0.3	21.5	104.2%
2005	9,496	8.5	11.3	19.9	43.0%	4.8	17.5	0.2	22.5	112.3%
2004	9,608	8.5	11.1	19.7	43.4%	3.5	18.5	0.2	22.2	111.7%
2003	9,792	8.5	11.0	19.5	43.6%	3.8	16.2	0.2	20.2	102.2%
2002	9,520	8.5	11.0	19.6	43.5%	4.0	14.5	0.3	18.8	94.8%
2001	9,700	8.4	11.1	19.5	43.2%	4.8	15.7	0.3	20.7	105.0%
2000	9,820	8.3	11.2	19.5	42.8%	4.9	16.3	0.3	21.5	108.7%
1999	10,024	8.1	11.1	19.2	42.1%	5.1	15.9	0.3	21.3	109.2%
1998	10,272	8.0	11.1	19.1	41.9%	4.5	16.5	0.3	21.3	109.7%
1997	10,605	8.0	11.0	18.9	42.1%	3.7	15.9	0.3	19.9	103.8%
1996	10,884	8.1	11.0	19.0	42.4%	2.9	15.6	0.3	18.8	97.0%
1995	11,285	8.3	11.2	19.5	42.6%	4.4	13.1	0.2	17.8	90.0%
1994	11,592	8.4	11.5	19.9	42.1%	3.8	16.6	0.3	20.7	102.5%
1993	11,866	8.5	11.6	20.1	42.2%	5.4	12.1	0.3	17.8	87.0%
1992	12,428	8.7	12.1	20.8	41.7%	4.3	16.2	0.2	20.7	98.7%
1991	12,825	8.9	12.2	21.1	42.3%	4.8	13.1	0.2	18.1	85.0%
1990	13,214	9.1	12.4	21.5	42.3%	5.0	14.3	0.1	19.5	89.9%
1989	13,517	9.4	12.8	22.2	42.3%	4.5	13.2	0.1	17.9	79.9%
1988	13,802	9.6	13.3	22.9	41.9%	8.0	9.7	0.1	17.8	77.4%
1987	13,873	9.6	13.6	23.2	41.4%	9.6	13.1	0.1	22.8	97.8%
1986	14,041	9.1	13.8	22.9	39.7%	9.0	14.5	0.1	23.5	102.1%
1985	13,770	8.2	NA	NA	NA	6.2	15.9	0.1	22.2	NA
1984	13,921	8.1	NA	NA	NA	5.0	14.4	0.1	19.5	NA
1983	14,195	8.1	NA	NA	NA	8.0	9.9	0.0	18.0	NA
1982	14,706	7.9	NA	NA	NA	6.8	15.5	0.0	22.3	NA
1981	14,691	7.3	NA	NA	NA	5.1	15.2	0.0	20.3	NA
1980	14,944	7.2	NA	NA	NA	5.5	12.5	0.0	18.1	NA
1979	15,178	7.1	NA	NA	NA	5.0	14.3	0.0	19.3	NA
1978	15,363	7.0	NA	NA	NA	4.8	13.0	0.0	17.7	NA

1/ Data Sources: 1) U.S. Department of Agriculture's (USDA) National Agricultural Statistics Service for the following: 1978-2013 off-farm grain storage facilities, 1978-2013 off-farm grain storage capacity, 1986-2013 on-farm grain storage capacity, 1978-2014 beginning grain stocks and 1978-2014 grain production; 2) USDA's Economic Research Service's February 2014 Agricultural Baseline for 2015-2020 beginning grain stocks, 2015-2020 grain production and 2015-2020 grain imports; and 3) USDA's Foreign Agricultural Service for 1978-2014 grain imports.

2/ Includes barley, corn, oats, rice, sorghum, soybeans and wheat.

Attachment B

RTP ENVIRONMENTAL ASSOCIATES, INC.®
304-A West Millbrook Road
Raleigh North Carolina 27609
(919) 845-1422

Memorandum

To: Jess McCluer and Dave Ailor

CC: Peter Wyckoff, NSPS Subpart DD Coalition

From: Jack Burke – RTP Environmental Associates, Inc.

Date: June 28, 2010

Re: **Applicability of and Alternatives to the Current NSPS Subpart DD Barge Unloading Standard**

Background

Subpart DD defines each barge unloading station as an affected facility. The term "barge unloading station" is not specifically defined, but the term "grain unloading station" is defined as "that portion of a grain elevator where the grain is transferred from a truck, railcar, barge, or ship to a receiving hopper."

Subpart DD regulates fugitive particulate matter emissions from certain barge unloading operations through a design/work practice standard at §60.302(d):

> "The owner or operator of any barge or ship unloading station shall operate as follows:
>
> (1) The unloading leg shall be enclosed from the top (including the receiving hopper) to the center line of the bottom pulley and ventilation to a control device shall be maintained on both sides of the leg and the grain receiving hopper.
>
> (2) The total rate of air ventilated shall be at least 32.1 actual cubic meters per cubic meter of grain handling capacity (ca. 40 ft^3/bu).
>
> (3) Rather than meet the requirements of paragraphs (d)(1) and (2) of this section the owner or operator may use other methods of emission control if it is demonstrated to the Administrator's satisfaction that they would reduce emissions of particulate matter to the same level or less."

To aid in understanding the scope of this requirement, RTP reviewed the record for the original Subpart DD rulemaking. In regards to barge unloading, the "Standards Support" document for the 1977 proposed rule states:

> "Grain is received by barge at inland terminal and port terminal elevators. The unloading areas are generally open to the weather. In most cases grain is unloaded with a bucket

elevator (leg) that is lowered into the barge. Their capacities range from 15,000 up to 75,000 bushels per hour; the average is about 30,000."[1]

And in the proposed rule, EPA states:

> "All of the bucket elevators (legs) observed by EPA at barge and ship unloading stations during the development of the proposed standards had various types of enclosures and were ventilated. A facility with the leg enclosed from the top (including the receiving hopper) to the center line of the bottom pulley appeared to perform with the least emissions. This facility was observed in operation with and without the ventilation system in operation. Visible emissions were observed to be significantly lower when the ventilation system was operating than when it was not. EPA concluded that this system represents the best demonstrated system of emission reduction (considering costs) and proposes an equipment standard based on the design of' this system." [42 FR 2845]

There were no changes in the barge unloading provisions between the proposed and the final rules.[2] In RTP's view, the above statements demonstrate that Subpart DD is focused on regulating fugitive emissions from bucket elevator unloading legs used for barge unloading.

§60.302(d)(3) provides for equivalency determinations in situations where it is not possible to meet the design standards in §60.302(d)(1) and (2). There are several types of barge unloading equipment that have been developed since Subpart DD was promulgated, which appear to fall into this category. Specifically, continuous barge unloaders (CBUs) and en-masse style drag conveyors could conceivably be considered to have "unloading legs" and, therefore, be subject to the provisions of Subpart DD. However, neither of these unloading systems is a "bucket elevator" as the term is used in the original Subpart DD rulemaking record. These unloading systems differ significantly in design from the unloading legs referenced in §60.302(d).

Based on discussions with Coalition members, RTP has determined that there is some confusion among both elevator owners and permitting authorities as to how alternative unloading systems (i.e., systems that do not employ a bucket elevator unloading leg) are regulated under Subpart DD. In some cases, members of the Coalition have applied for equivalency determinations under the provisions of §60.302(d)(3), even though their unloading system does not include a bucket elevator unloading leg. And in some cases, Coalition members have had difficulty in obtaining equivalency determinations. The Coalition has expressed a desire to have Subpart DD modified to address these issues.

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[1] "Standards Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Grain Elevator Industry," EPA·450/2·77·001a, January 1977.

[2] "Standards Support and Environmental Impact Statement Volume 2: Promulgated Standards of Performance for Grain Elevator Industry," EPA-450/2-77-001, April 1978.

Analysis

A careful review of the provisions in §60.302(d) and the relevant rulemaking record leads one to conclude that the Subpart DD requirements apply only in those situations where an affected
barge unloading operation employs a bucket elevator unloading leg to remove grain from a barge or ship. Other types of barge and ship unloading operations (e.g., barge unloading using a clam shell) are not subject to any specific requirements under Subpart DD. This interpretation is consistent with the data and information EPA used as the basis for the requirements in
Subpart DD.

It would be helpful for EPA to eliminate the confusion surrounding the scope and applicability of the barge unloading provisions in Subpart DD. Additionally, it would be desirable for the
Agency to streamline the equivalency determination process in situations
where such a determination is required.

Based on a May 6th meeting between RTP, EPA and ERG, it appears the Agency is considering an opacity limit as an alternative to the design standard in the current rule. Based on discussions with and information received from Coalition members, RTP believes that available data are inadequate for developing an opacity limit for alternative unloading designs. Through a survey of Coalition members, RTP obtained opacity test data for only one alternative unloading leg. This is an en-masse drag conveyor at Bunge's Cairo, Illinois facility. No opacity test data have been identified for a CBU and only two opacity tests were obtained for barge unloading operations that do not involve unloading legs (e.g., a clam-shell unloader).

Because alternative unloading systems (i.e., unloading systems that do not use a bucket elevator unloading leg) were not considered in the original Subpart DD rulemaking, the threshold question that must be addressed going forward is whether such alternative systems are a significant source of emissions (i.e., Is it appropriate to regulate these sources under Subpart DD?). RTP understands that the Coalition is prepared to work with U.S. EPA in addressing this question.

Attachment C

RTP ENVIRONMENTAL ASSOCIATES, INC.®
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Memorandum

To: Jess McCluer & Dave Ailor

CC: Peter Wyckoff, NSPS Subpart DD Coalition

From: Jack Burke – RTP Environmental Associates, Inc.

Date: June 15, 2010

Re: **Column Grain Dryers Using Woven Wire Screens as the Column Walls**

Introduction and Summary

This memorandum summarizes RTP's analysis of issues associated with the possible regulation of column grain dryers that use woven wire screens instead of perforated plates. RTP has reviewed available data on this type of dryer. Based on this review, the rate of emissions from these dryers is low and the rate of construction, modification, and reconstruction of such dryers is also low. The combination of these factors means that such dryers are an insignificant subcategory of equipment at grain elevators from an emissions perspective and, therefore, are not appropriate for regulation under Subpart DD. RTP also found no data to support the position that these dryers can meet a 0 percent opacity limit. The limited data available suggest any opacity limit should be at least 10 percent.

Background

Subpart DD regulates emissions from certain column dryers. Figure 1 is a simplified cross-section sketch of a column dryer. In this type of dryer, wet grain is fed to the dryer at the top and flows by gravity through a packed column to the bottom of the dryer. Heated air is introduced on the inside of the columns and flows out through the grain to the atmosphere. The grain columns are contained by parallel walls constructed of perforated plates or wire mesh screens, depending on the application. Air moving through the grain columns dries the grain but also can entrain particulate matter, which may be emitted to the atmosphere.

Subpart DD only regulates emissions from certain types of column dryers. The rule defines a column dryer to be "*any equipment used to reduce the moisture content of grain in which the grain flows from the top to the bottom in one or more continuous packed columns between* ***two perforated metal sheets***."[emphasis added] Thus, column dryers that contain the grain column between walls made of something other than perforated metal sheets (e.g., woven wire screens) are not considered column dryers for purposes of Subpart DD.

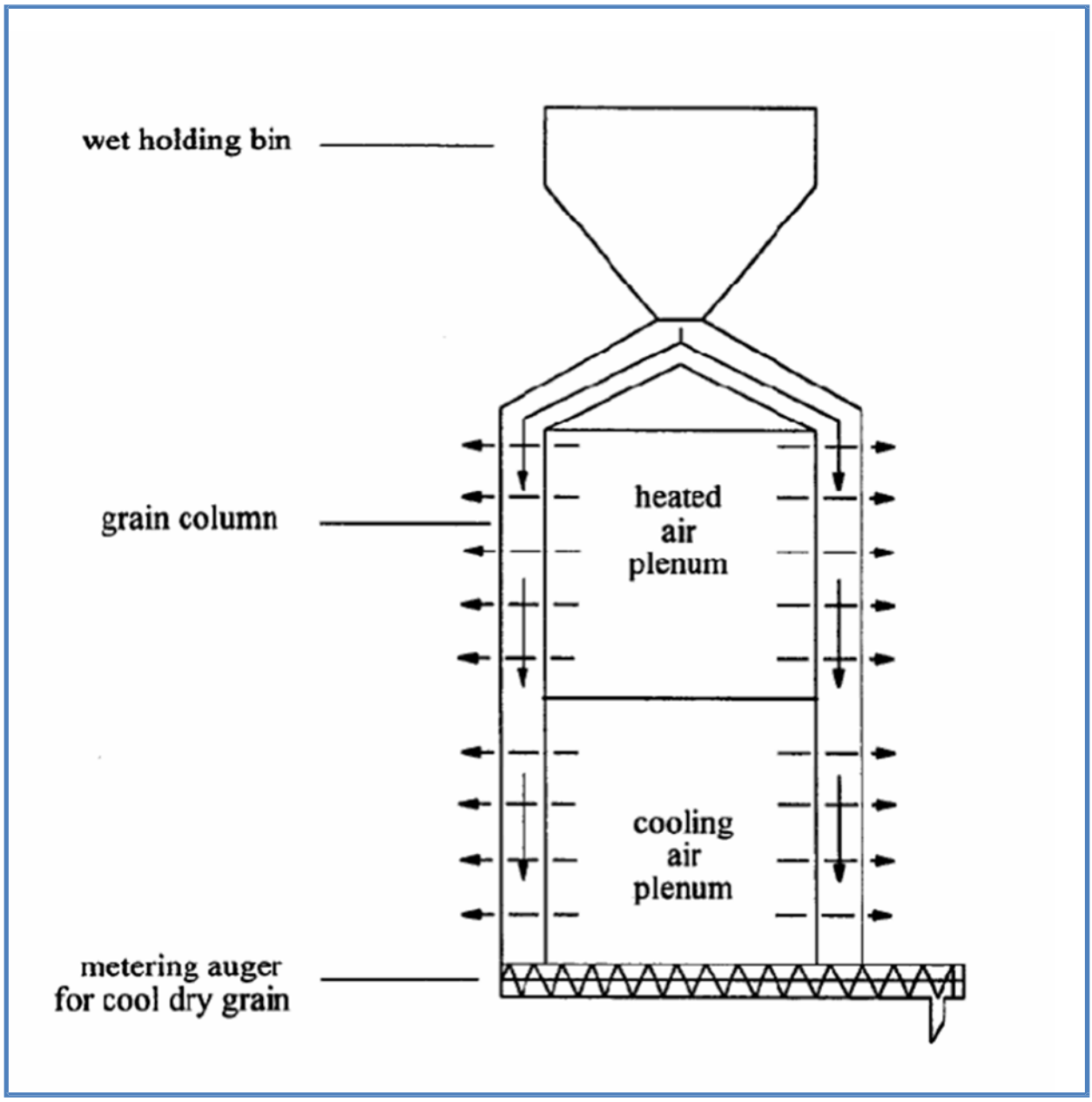

Figure 1. Simplified Schematic of Grain Column Dryer

Under Subpart DD, any "column dryer" with a column plate perforation exceeding 2.4 mm diameter (ca. 0.094 inch) must meet a 0 percent opacity standard. Otherwise, Subpart DD contains no specific emission limits or other requirements for column dryers. The standard was established in this way because, during the 1977-1978 rulemaking process, EPA concluded that add-on controls for column dryers were not cost effective.[1] The structure of the rule language is such that meeting a design standard (e.g., a dryer having column plate perforations less than or equal to 2.4 mm in diameter) effectively exempts regulated column dryers from the 0 percent opacity standard.

At the time the column dryer standard was developed, there may have been relatively few dryers that employed wire screens as walls to contain the grain columns in the dryer.[2] Wire screen walls are preferred for rice drying because they offer greater durability, result in less kernel damage, and provide for more efficient dryer operation. Figure 2 contains photographs of the two types of column dryer walls.

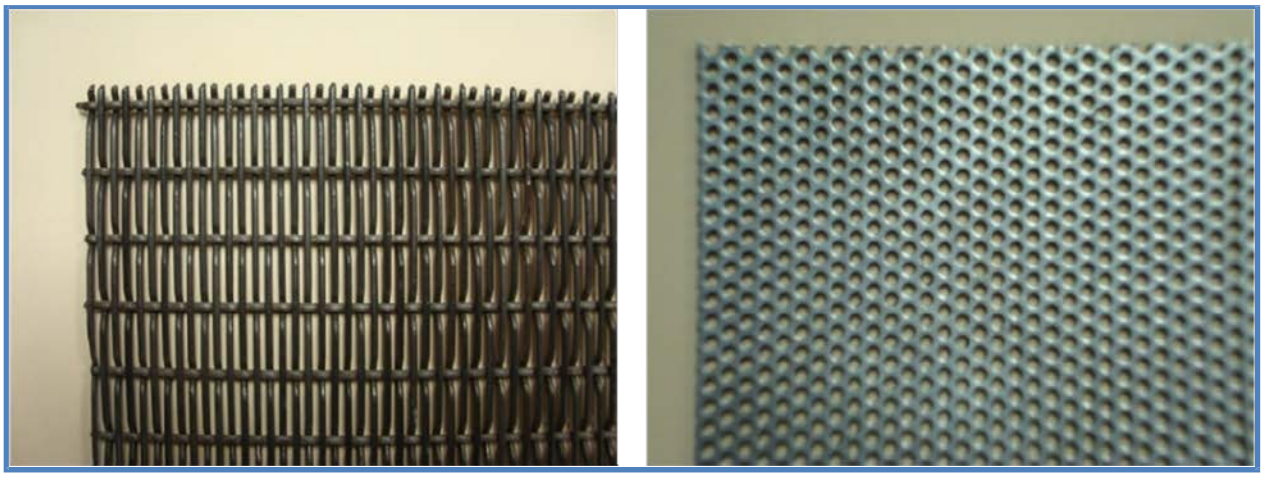

Figure 2. Woven Wire and Perforated Plate Materials

RTP has examined the database compiled from the responses by Subpart DD Coalition members to U.S. EPA's September 2009 Section 114 information request. Of the 28 column dryers that

[1] See *"Standards Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Grain Elevator Industry;"* U.S. EPA, OAQPS, January 1977. One reason that controlling grain dryers is expensive is because typically they are only used for relatively short periods each year as grain is harvested. In some years the dryers are not used at all.

[2] Of the 28 wire screen dryers identified in the Subpart DD Section 114 survey responses, only two were constructed prior to 1989 and only one prior to 1980. However, RTP is aware that this type of dryer was in relatively common use for drying rice in California during the 1970s (see, for example, *"Staff Report on Emissions from Rice Dryers in the Sacramento Valley Air Basin"*, California Air Resources Board, April 11, 1974).

indicate the use of wire screen column walls, all but two are used for rice or rice and some other grain.[3]

RTP also contacted several dryer manufacturers to better understand the grain dryer marketplace in general and the market for wire screen dryers in particular. We identified two manufacturers who sell "rice dryers" that use wire screens as column walls.[4] Recent sales of these rice dryers have been limited to a one or two each year from each of these manufacturers. One of these manufacturers described wire screen dryers as a "niche market."

RTP also reviewed recent data on U.S. rice production. These data, which are plotted in Figure 3, show that rice production was relatively static between 2002 and 2009.[5] This steady production rate suggests that rice dryer sales are likely driven by the need for replacement units rather than a large expansion in capacity due to a long-term trend of increasing rice crop production.

Wire Screen Column Dryer Emissions

As part of its ongoing review of Subpart DD, U.S. EPA may be considering adding compliance requirements for column dryers that use wire screens (i.e., rice dryers). One issue is whether the expected growth of this source subcategory warrants regulation under the NSPS. To evaluate this issue, there are at least two questions that should be addressed. Both relate to the significance of column dryers as sources of emissions at grain elevators. The first question is the level of emissions from rice dryers. The second is the expected growth in the population of new and reconstructed rice dryers going forward. The discussion that follows addresses each of these questions.

In an effort to assess emissions from new and reconstructed rice dryers, RTP reviewed the background documentation for the development of AP-42 Section 9.9.1.[6] This review, which provided information on grain dryer emission factors specific to screen rice dryers, shows that these emissions are in general lower than the final AP-42 emission factor for column grain dryers. According to the data in the AP-42 background report, the average particulate emissions from screen rice dryers is 0.051 lb/ton, as compared to the AP-42 general grain column dryer emission factor of 0.22 lb/ton.[7]

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[3] RTP also determined that one of the two non-rice dryers is actually not a woven wire screen-type dryer (i.e., the Zimmerman dryer uses a thin sheet of stainless steel that appears to be a "screen," but is actually a perforated plate).

[4] The dryer vendors contacted by RTP include Shanzer (a Division of D & W Industries, Inc.) and GSI (a Division of GSI Group).

[5] These years represent the rice crop data that are readily available on USDA's website.

[6] "*Emission Factor Documentation for AP-42 Section 9.9.1 - Grain Elevators and Grain Processing Plants - Final Report*", RTI International, April 2003.

[7] *Ibid*, Tables 4-13 and 4-16.

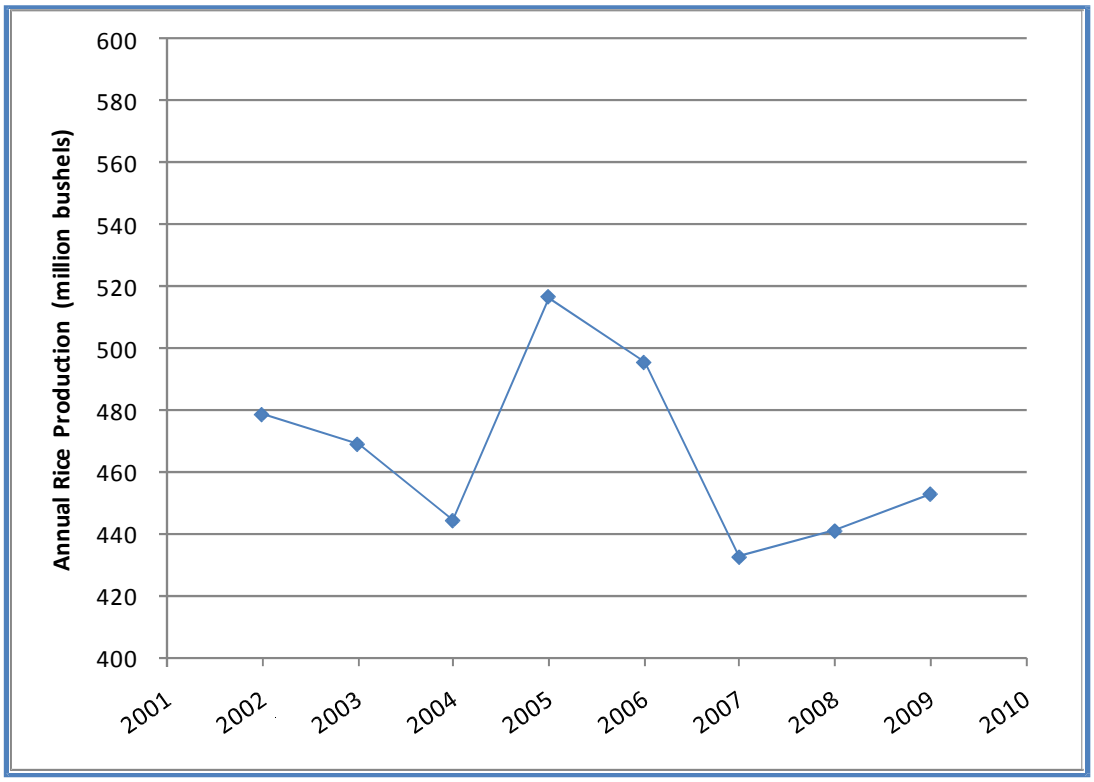

Figure 3. Recent U.S. Rice Production

A typical rice dryer has a capacity of about 5,000 bushels per hour and operates for about 2,000 hours per year.[8] Rough rice has a bulk density of about 45 pounds per bushel. Thus, using the emission factor data cited above, a typical rice dryer would be expected to emit about 5.7 pounds per hour of particulate emission. The PM_{10} and $PM_{2.5}$ fractions of these emissions are estimated to be about 2.2 and 0.4 lb/hr, respectively.[9] For 2,000 hours per year of operation, annual emissions from a typical rice dryer would be about 5.7 tons of PM, 2.2 tons of PM_{10}, and 0.4 tons of $PM_{2.5}$.

[8] Approximate average capacity and operating hours of rice dryers reported in surveys, per discussion with Neil Washburn, Riceland Foods, Inc.

[9] The average PM_{10} fraction of screen rice dryer PM emissions is ~38 percent, and the average $PM_{2.5}$ fraction is ~6.5 percent; see *"Staff Report on Emissions from Rice Dryers in the Sacramento Valley Air Basin"*, California Air Resources Board, April 11, 1974, Figure 6.

RTP estimates the current U.S. population of screen rice dryers to be somewhere in the neighborhood of 120 units.[10] Assuming these dryers have a 30-year service life, about 3 percent of them will be reconstructed or replaced each year. With no growth in rice crop, this translates to about four new or reconstructed rice dryers annually. This value is consistent with the anecdotal information obtained from the two rice dryer vendors contacted by RTP. Given the relatively low emissions from each dryer and the small number of dryers likely to become subject to any prospective NSPS, it is reasonable to conclude that wire screen rice dryers belong to a subcategory of sources that is not "significant" from the perspective of the NSPS process.

Opacity Standards

Through discussions with U.S. EPA, RTP is aware that the Agency is considering a 0 percent opacity standard for screen rice dryers. This standard is based on current permit limits for several dryers in Arkansas. It is RTP's understanding that these limits were imposed by the Arkansas Department of Environmental Quality (ADEQ) based on the Department's interpretation that the dryers are subject to Subpart DD. It is also RTP's understanding that these dryers may not meet a 0 percent opacity standard under all operating conditions. In particular, during initial startup and when the rice supply is changed, the dryers exhibit short-term visible emissions in excess of 0 percent opacity. Finally, it is RTP's understanding that the dryers in question have never been compliance tested using Method 9, so no data actually exist to demonstrate the ability to comply with a 0 percent opacity standard. Limited opacity data provided to U.S. EPA by the Coalition show that screen rice dryers typically cannot meet such a limit on a short-term basis.[11] If such a limit cannot be achieved in practice, then it should not form the basis for an NSPS.

Conclusions

In the U.S., wire screen column dryers are used primarily for drying rice. If Subpart DD were to regulate wire screen column dryers, about four dryers per year would become subject to the NSPS, for a total of 20 dryers over the next five years. Given the relatively small rate of emissions from these dryers, this subcategory of sources should be considered insignificant and therefore, should not be regulated under the revised NSPS.

It does not appear that a 0 percent opacity standard for wire screen rice dryers has been achieved in practice. Therefore, this limit should not form the basis for an NSPS for these dryers. Based on the data supplied to U.S. EPA in September 2009, a more appropriate limit would be 10 percent opacity.

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[10] This estimate is based on total U.S. rice production of about 450 million bushels in 2009, an average dryer size of 5,000 bushels per hour, average operating hours of 2,000 hours per year, the assumption that 90 percent of rice production is dried, and the assumption that each bushel of rice passes through a dryer three times. Thus, the number of 5,000 bushel/hour rice dryers can be estimated as follows:
(450 MM bushels/yr) x (0.9 bushels dried /bushel) x (3 passes) / (5,000 bushels/hr/dryer x 2,000 hr/yr) = 121.5 dryers

[11] Data provided to U.S. EPA by Riceland Foods, Inc. in a presentation made in September 2009.

Attachment D

NSPS SUBPART DD COALITION

VIA ELECTRONIC MAIL

November 8, 2012

Mr. William Schrock
U.S. Environmental Protection Agency
EPA-OAQPS
109 T.W. Alexander Drive
Mail Code E143-03
Research Triangle Park, NC 27709

Re.: Two New "Issue Papers" from the NSPS Subpart DD Coalition

Dear Bill:

On Monday, November 5, the two of us, together with Peter Wyckoff (Pillsbury Winthrop Shaw Pittman (PWSP)), counsel to the NSPS Subpart DD Coalition[1] which we co-chair, and Jack Burke (RTP Environmental Associates), consultant to the Coalition, met with you, via conference call, to inform you about several issues on which the Coalition had been working related to EPA's ongoing review of New Source Performance Standard (NSPS) Subpart DD for Grain Elevators. During the call we informed you that we were nearing completion of two new papers on certain issues related to the review, that we would urge you to consider as you complete work on the Subpart DD rulemaking package.

The Coalition has completed work on these papers, and is submitting them to you via this letter. The two papers, which are attached, include:

- **"Basis for Increasing the Applicability Thresholds in NSPS Subpart DD." This paper, which was developed by Peter, concludes that "The record of the 1978 promulgation of Subpart DD established an appropriate and precedential analytical framework for setting the applicability thresholds. That framework, when applied to the substantial changes in relevant circumstances over the last 34 years, calls logically for a correspondingly substantial increase in the original thresholds at least and, ultimately, for repeal of Subpart DD. Putting aside, for the sake of argument, the increased strength of state/local PM control programs, the minimum increase should be on the order of 250 percent at least – such that the new thresholds would be 3.5 million and 8.8 million bushels, respectively."**

[1] The members of the NSPS Subpart DD Coalition include the Corn Refiners Association, the North American Millers' Association, the National Council of Farmer Cooperatives, the National Grain and Feed Association, the National Oilseed Processors Association and the USA Rice Federation.

- **<u>"Methods for Evaluating the Significance of Temporary Storage Capacity."</u> This paper, which was developed by Jack, discusses a number of considerations that support using a generic, rather than a site-specific significance factor and concludes that "… the true significance of TSFs can only be determined by evaluating TSFs relative to the entire population of elevators. This approach (i.e., using all of the §114 Data) results in a TSF significance factor of 10% or less."**

As is the case with previous papers we have submitted to you, these two papers reflect the conclusions of PWSP and RTP, as reviewed and endorsed by the Coalition.

Thank you for your time and attention. Please contact us if you have any questions.

Sincerely,

Jess McCluer
Coalition Co-Chairman
National Grain and Feed Association
Director of Safety and Regulatory Affairs
1250 Eye Street, NW, Suite 1003
Washington, DC 20005
Phone: 202-289-0873
jmccluer@ngfa.org

David C. Ailor, P.E.
Coalition Co-Chairman
National Oilseed Processors Association
Executive Vice President, Regulatory Affairs
1300 L Street, NW, Suite 1020
Washington, DC 20005-4168
Phone: 202-842-0463 x5
dailor@nopa.org

Two Attachments

cc: NSPS Subpart DD Coalition

RTP ENVIRONMENTAL ASSOCIATES, INC.®
304-A West Millbrook Road
Raleigh North Carolina 27609
(919) 845-1422

Memorandum

To: Jess McCluer (NGFA) and Dave Ailor (NOPA)

CC: Peter Wyckoff (Pillsbury Winthrop Shaw Pittman LLP), NSPS Subpart DD Coalition

From: Jack Burke – RTP Environmental Associates, Inc.

Date: November 8, 2012

Re: **Methods for Evaluating the Significance of Temporary Storage Capacity**

Background

The applicability of the grain elevator NSPS (40 CFR 60, Subpart DD) to a particular grain elevator is determined based on the type of elevator and the elevator's permanent storage capacity. Grain terminal elevators with a permanent storage capacity of less than 2.5 million bushels are not subject to the NSPS, while grain storage elevators with a permanent storage capacity of less than 1.0 million bushels are not subject to the rule. EPA has indicated that it is considering a regulatory proposal that will count some fraction of a grain elevator's temporary storage facility (TSF) capacity as permanent storage capacity for purposes of future NSPS applicability determinations.

EPA has discussed several possible ways in which TSF capacity might count in making NSPS applicability determinations.[1] One option that EPA may be considering is determining the significance of TSFs on a site-specific basis. In general, this option would evaluate the significance of TSF capacity based on how the permanent storage capacity at a particular grain elevator has been utilized in the recent past. Under this option, a bushel of TSF capacity at an elevator with a high permanent storage turnover rate would be of lesser significance in determining NSPS applicability than a bushel of TSF capacity at an elevator with low permanent

[1] Nothing in the analysis presented herein should be construed as a change in the NSPS Subpart DD Coalition's overarching views regarding TSFs or the fact that the Coalition believes that EPA should repeal Subpart DD.

storage turnover rates.[2] This would be the case even though a bushel of TSF capacity has the same environmental significance at either of these elevators.[3]

A second option that EPA may be considering is the use of a generic or industry-wide factor for assessing the environmental significance of TSF capacity relative to permanent storage capacity at grain elevators. Using a generic factor, all TSF capacity would be treated equally regardless of its location or how the co-located permanent storage capacity happens to be utilized.

A number of considerations support using a generic, rather than a site-specific significance factor. These include:

- If properly selected, a generic factor would be reflective of the environmental significance of TSFs within the universe of grain elevators subject to the NSPS.
- A generic significance factor would treat each bushel of TSF capacity equally, which is appropriate because the 114 Data show that virtually all TSFs (i.e., in excess of 95%) experience one annual turnover and, thus, have equal environmental significance regardless of their location.[4]
- A generic significance factor would avoid situations where the relationship between temporary storage and permanent storage may be illogical due to some unique site-specific circumstances (e.g., at an elevator whose permanent storage capacity has not been used in the recent past).
- A generic significance factor would be readily applicable to both new and existing facilities, while application of a site-specific factor at a new or newly purchased facility might prove difficult to evaluate and enforce.
- A generic significance factor would be simpler than a site-specific factor and, therefore, would be less burdensome for both industry (i.e., reduced recordkeeping and reporting

[2] The term "turnover rate" is used here to describe the average number of times that the permanent storage at an elevator turns over in a year. It is a value calculated by dividing the annual elevator permanent storage throughput rate by the elevator's permanent storage capacity. For example, an elevator with 1 million bushels of permanent storage capacity that handles 3 million bushels of grain in a particular year would have a turnover rate of 3 for that year.

[3] Based on the responses to U.S. EPA's 2009 §114 survey (the "§114 Data"), TSFs experience approximately one annual turnover, and emissions from a particular TSF are primarily dependent on the number of turnovers. Thus, a bushel of TSF capacity has virtually the same environmental significance regardless of where it is located and regardless of how the co-located permanent storage capacity is utilized.

[4] The responses to the §114 survey collectively contained data for 121grain elevators, including data representing 119 storage unit years of TSF operation. Of these 119 storage unit years, there were a total of five storage unit years with more than one turnover per year.

requirements) and regulatory agencies (i.e., a single factor is easier to enforce and would likely improve compliance).

Appropriate Basis for a Generic TSF Significance Factor

Analysis of the §114 Data shows that from 2005-2007 for all elevators covered by the §114 grain elevator survey, the number of annual turnovers of permanent storage capacity averaged 9.3, while the annual turnovers of TSF capacity averaged 0.9.[5] RTP Environmental Associates, Inc. (RTP) developed an emissions model to estimate the relative significance of temporary and permanent storage and determined that the uncontrolled emissions from both types of storage were similar when compared on the basis of a unit of throughput.[6] Given the ratio of permanent-to-temporary storage throughputs from the 114 Data, however, this emissions model indicates that on average, a bushel of permanent storage has approximately 10 times more environmental significance than a bushel of temporary storage because of the much greater rates of throughput for permanent storage units. In other words, the §114 Data support the use of a TSF capacity "significance factor" of 10%. This factor implies that the average uncontrolled PM_{10} emissions from 10 bushels of temporary storage capacity are equivalent to the uncontrolled emissions from one bushel of permanent storage capacity. As an example, using this significance factor, a one million-bushel TSF would count as 100,000 bushels of permanent storage capacity in assessing Subpart DD applicability. This value is supported by the §114 Data, taking into consideration the model TSF emissions profile developed by RTP. Also, this value may actually be biased high due to the preferential inclusion of elevators with installed TSFs in the survey database,[7] coupled with the fact that the §114 Data show that elevators with temporary storage experience fewer annual turnovers of their permanent storage capacity.[8]

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[5] These values are weighted averages and computed based on total annual throughput rates divided by total storage capacities for the three years for which data were reported.

[6] The estimated uncontrolled PM_{10} emissions factors for permanent storage and temporary storage are 0.077 pounds per ton of throughput and 0.084 pounds per ton, respectively (see "Analysis of 114 Survey Data by the Subpart DD Coalition" presented to USEPA on February 24, 2010).

[7] The following statement is reproduced from the instructions for the §114 grain elevator survey: *Since one of the goals of this survey is to gather data on temporary storage facilities, EPA encourages respondents to exercise any discretion afforded by paragraphs A-D above in favor of submitting data on such facilities.* This statement indicates a potential for the survey to be biased towards those grain elevators with TSFs installed.

[8] The average number of turnovers in permanent storage capacity for all elevators in the §114 database is about twice the average number of turnovers in permanent storage capacity at only those elevators that also have TSF capacity installed. Assuming this relationship can be generalized, any bias in the survey responses towards elevators with TSFs would tend to lower the average number of turnovers in permanent storage for the surveyed facilities relative to the universe of Subpart DD affected grain elevators.

EPA may be considering the use of a generic significance factor for temporary storage that is based on throughput rates only at those grain elevators with temporary storage installed. Hence, RTP evaluated the §114 Data for this subset of facilities as well. Analysis of the §114 Data from 2005-2007 for only those elevators covered by the survey with TSFs installed shows that the number of annual turnovers of permanent storage capacity averaged 4.7, while the annual turnovers of TSF capacity averaged 0.9. These data show that at those elevators with temporary storage, the average annual permanent storage turnover rate was about one-half of the average for all elevators in the §114 Database. As a result, the TSF capacity significance factor derived from this subset of the data is approximately 20%, or approximately double the significance factor derived from the entire data set.

Assuming that the intent of the TSF significance factor is to assess the potential environmental significance of temporary storage relative to the significance of permanent storage, it is RTP's view that derivation of that factor should be based on all of the §114 Data and not on a selected subset of data with significantly different characteristics than the population mean. With the possible exception of the bias noted previously in regard to TSFs, the elevators included in the §114 database are intended to represent a cross-section of the U.S. grain elevator population. As such, measures of TSF and permanent storage capacity utilization derived from the entire database are also representative of the U.S. grain elevator population. Thus, the true significance of TSFs can only be determined by evaluating TSFs relative to the entire population of elevators. This approach (i.e., using all of the §114 Data) results in a TSF significance factor of 10% or less.

Attachment E

LIST OF EPA REQUESTS FOR INFORMATION / COMMENT
NSPS SUBPART DDa
FEDERAL REGISTER: WEDNESDAY, JULY 9, 2014

V. Rationale for Proposed Amendments
A. How did the EPA conduct the BSER analysis?

b. Application of Mineral Oil
Page 39251 – left column

1. EPA requests additional information on the on the effectiveness of mineral oil in combination with existing controls and when applied at fugitive sources regulated by the NSPS, particularly those associated with portable grain handling equipment. EPA is also soliciting information on the capital and operating cost of mineral oil application systems and any problems in grain quality associated with using mineral oil.

   The Coalition's response to request appears in the section titled: *Comments on Proposed Subpart DDa*; sub-section: *Performance Standards in Proposed Subpart DDa*; sub-paragraph: *Mineral Oil Must Not Be Considered as BSER*.

3. BSER Evaluation for New or Significantly Changed Emission Sources

a. New Unloading Operation Emission Sources at Barges—En-Masse Drag Conveyors
Page 39252 – left and center columns

2. EPA expects that en-masse drag conveyor systems that have a small opening could achieve a lower level of opacity if the opening was covered; however, EPA does not have sufficient data to establish a different opacity limit for these systems. EPA does not have information on the effectiveness of the cover, costs of the cover, procedures for using the cover or if there are operational or health issues that may occur if the opening is covered. EPA is requesting additional information to evaluate this control option.

   The EPA requests comment on all aspects of the BSER determination for barge unloading using an en-masse drag conveyor. EPA also requests comment on whether there are other types of barge unloading systems that should be considered for subcategorization. If so, the EPA requests information on control technologies that may be used on the unloading system, costs, emission reductions associated with the control and emissions test information for them. The EPA also requests information on technologies or practices that may be used to control emissions from barge unloading using an en-masse conveyor system and additional opacity tests conducted at en-masse conveyor systems.

   The Coalition's response to the request appears in the section titled: *Comments on Proposed Subpart DDa*: sub-section: *Performance Standards in Proposed Subpart DDa, Sub-section*; sub-paragraph: *Equipment/Work-practices for Ship/Barge Unloading*.

b. New Wire Screen Column Dryers
Page 39253 – left column

3. EPA is requesting additional emissions test information and descriptions for emptying and filling activities to fully understand this process and set, if appropriate, a standard of performance. EPA requests comment on all aspects of the BSER analysis for wire screen column dryers. EPA also request additional emission test information for this subcategory of grain dryer.

   The Coalition's response to the request appears in the section titled: *Comments on Proposed Subpart DDa*; sub-section: *Definition of "Source" (i.e. "Affected Facility") to Which Proposed Subpart DDa Would Apply*; sub-paragraph: *The Proposed Definition of Wire Screen Column Dryer Is Inconsistent with the Preamble Discussion of This Dryer*.

c. Temporary Storage Facilities
Page 39253 – right column

4. EPA is proposing to determine that BSER for portable grain handling, loading and unloading equipment associated with TSFs is no control. EPA requests comment on this proposed determination. EPA is also soliciting emissions test data for these sources, as well as information on the types of emission controls that are feasible and the cost of the controls.

   The Coalition's response to the request appears under in the section titled: *Comments on Proposed Subpart DDa*; sub-section: *Performance Standards in Proposed Subpart DDa, Sub-section*; sub-paragraph: *The Coalition Supports EPA's Proposal for Loading and Unloading of TSFs by Means of Portable Equipment*.

Page 39254 – center column

5. EPA determined that the costs and emission reductions associate with subpart DDa were reasonable and BSER is compliant with the proposed subpart DDa PM and opacity limits for fixed equipment. EPA requests comment on their determination and additional cost and emissions information on these systems specific to TSFs.

   The Coalition's response to the request appears under section titled: *Comments on Proposed Subpart DDa*; sub-section*: Performance Standards in Proposed Subpart DDa, Sub-section*; sub-paragraph: *EPA Should Eliminate the Proposed Opacity Standards for Dedicated TSF Unloading Stations*.

B. How did the EPA evaluate changes to the methodology for determining applicability of the grain elevator NSPS?
Page 39255 – left column

6. EPA is proposing that grain elevators use a default factor to calculate the adjusted TSF capacity. EPA requests comment on this proposed approach. Refer to the memorandum,

''Determination of Permanent Storage Capacity Equivalents for Temporary Storage Facilities'' in the grain elevator docket at EPA–HQ–OAR–2010–0706 for further details.

The Coalition's response to the request appears under section titled: *Comments on Proposed Subpart DDa*; sub-section: *Definition of "Source" (i.e. "Affected Facility") to Which Proposed Subpart DDa Would Apply*; sub-paragraph: *EPA's Proposed Default Equation (Equation 2) for Evaluating the Significance of TSF Capacity Relative to Permanent Storage Capacity at Grain Elevators Is Biased and Therefore Attributes Too Much Significance to TSF Capacity*.

C. How did the EPA evaluate the compliance requirements in the grain elevator NSPS?
1. Testing and Monitoring Requirements
Page 39255 – center column

7. EPA requests comment on whether to require bag leak detection systems (BLDS) at affected facilities controlled with fabric filters and baghouses. Bag leak detectors are one method that has been used in other source categories for ensuring proper performance of fabric filter and baghouses. The EPA has estimated the capital cost of BLDS to be $24,000 per application. EPA is soliciting comments on whether BLDS can be used for affected facilities in this source category, problems that may occur specific to their use in this source category and the reasonableness of the cost for this source category.

The Coalition's response to the request appears under section titled: *Comments on Proposed Subpart DDa*; sub-section: *Compliance Assurance Measures: Schedule for Performance Testing, Parameter Monitoring, Record Keeping and Reporting*; sub-paragraph: *Bag Leak Detection Systems (BLDS).*

3. Startup, Shutdown and Malfunction Provisions
Page 39256 – center and left columns

8. EPA is proposing the elimination of the SSM exemption in this rule. Consistent with Sierra Club v. EPA, the EPA is proposing standards in this rule that apply at all times, including periods of startup or shutdown. The EPA has attempted to ensure that the provisions they are proposing to eliminate are inappropriate, unnecessary or redundant in the absence of the SSM exemption. EPA is specifically seeking comment on whether they have successfully done so.

The Coalition's response to the request appears under section titled: *Comments on Proposed Subpart DDa*; sub-section: *Performance Standards in Proposed Subpart DDa*, sub-paragraph: *EPA's Proposed Elimination for Purposes of Subpart DDa of the Exemption for SSM Periods Is Unauthorized and Unreasonable and Therefore Unlawful.*

a. Periods of Startup and Shutdown
Page 39256 – left column

9. The EPA proposes to apply the proposed standards during all periods of operation. EPA asks that if we believe that the EPA's conclusion is incorrect or that the EPA has failed to consider any relevant information on this point, the EPA encourages the submittal of comments, including test data during periods of startup and shutdown. EPA requests that any comments that contend that sources cannot meet the proposed standard during startup and shutdown periods should provide these data and other specifics supporting their claim.

The Coalition's response to the request appears under section titled: *Comments on the Proposed Amendments to Subpart DD as Applicable to Past Events*; sub-section: *Treatment in Subpart DD of Startups, Shutdowns and Malfunctions.*

D. How did the EPA evaluate additional changes for the grain elevator NSPS?
1. Revision to the Definition of ''Grain Unloading Station''
Page 39258 – left and center columns

10. EPA is proposing revisions to the definition of ''grain unloading station'' to clarify that a ''grain unloading station'' encompasses the portion of a grain elevator where the grain is transferred from a truck, railcar, barge or ship to a receiving hopper, or to the grain handling equipment that connects the unloading station to the rest of the grain elevator. This definition includes all of the equipment, support structures and associated dust control equipment and aspiration systems required to operate or are otherwise connected to the grain unloading station. EPA is requesting comment on their interpretation of the intent of the original NSPS definition of ''grain unloading station'' and their proposed revisions to the definition.

The Coalition's response to the request appears under section titled: *Comments on the Proposed Amendments to Subpart DD as Applicable to Past Events*; sub-paragraph: *Proposed Definition of "Grain Unloading Station."*

VIII. Statutory and Executive Order Reviews
J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations
Page 39262 – right column

11. The agency is seeking comment on the location of sources covered by the proposed standards and on the potential impacts of this rule on minority, low income and indigenous populations. The additional information that will be collected from the increase in testing requirements is expected to better inform the agency of the emissions associated with this source category and their significance, and will ensure better compliance with the proposed rule, and thus will result in the proposed rule being more protective of human health.

The Coalition's response to the request appears under section titled: *Legitimacy of Proposed Subpart DDa Under the Clean Air Act*; *the Paperwork Reduction Act, and E.O. 13563*; sub-section: *Comments of the Coalition*.