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Steve Shedd
EPA
Research Triangle Park, NC, State, 27711

RE: API RESPONSE TO GASOLINE DISTRIBUTION (GD) AREA SOUCE RULE CONFERENCE CALL OF JULY 12, 2006

Dear Mr. Steve Shedd:

API appreciates the opportunity to provide additional comments, prepared in collaboration and with the full support of the Independent Liquid Terminals Association (ILTA), regarding the proposed GD Area Source Rule. These comments are based primarily on the July 12, 2006 conference call with you to discuss the area source rule that EPA is drafting for the gasoline distribution industry. The purpose of this memo is to provide additional information for, and clarification of, API's issues and recommendations.

ISSUES

1) Monitoring of Vapor Processors.

Area sources tend to be smaller facilities than major sources, with very few personnel on site. Given that area sources emit lower levels of HAPs than major sources, with correspondingly lower risk to human health, and have limited resources on site, the burden imposed for compliance monitoring should be kept to a minimum.

a. Area Sources should *not* be subject to MACT General Provision Requirements.
Typical vapor recovery units and vapor combustion units readily achieve the suggested threshold of 80 mg/l as long as the unit is operating normally. In that optimal performance of these units is not needed to achieve the 80 mg/l standard, the checks required for monitoring systems in the Part 63 General Provisions are unnecessary. Specifically, the quality control requirements of Section 63.8 should not be required for monitoring systems under this rule.

b. Required Monitoring should be Parametric Monitoring, rather than Emissions Monitoring.
Monitoring of control devices at area sources should allow monitoring of an appropriate parameter, rather than requiring continuous emission monitoring systems (CEMS).

c. Examples of Reasonable Monitoring Requirements should be Specified in the Rule. The rule should specify examples of acceptable monitoring requirements for the common types of control devices. Monitoring of vapor combustion units, for example, might be specified as monitoring for the presence of a pilot flame. Monitoring of carbon adsorption units emissions performance can be effectively evaluated via parametric variables such as maximum vacuum pressure achieved during carbon regeneration.

Another method for monitoring carbon adsorption units is either a manual or automated measurement of the VOC concentration at the outlet, at a specified measurement frequency (such as monthly). The following language is taken from a permit issued by the Ohio EPA for a bulk gasoline terminal:

> The permittee shall perform monthly monitoring of the exhaust gas VOC concentration from both carbon adsorption vessels, using the 40 CFR 60, Appendix A, Method 21 procedure for open ended lines. The highest VOC concentration, as measured during the processing of vapors during the last 5 minutes of the adsorption cycle for each vessel, shall be recorded. The permittee shall maintain records of the monthly monitored VOC concentrations detected in the exhaust gases from the vapor recovery unit. This recordkeeping shall begin 30 days after the issuance of the permit to operate.
>
> The maximum exhaust gas VOC concentration shall not exceed 4% (as propane) from the carbon adsorption vessels. [A VOC concentration that exceeds 4% (as propane) is not necessarily indicative of a violation of the allowable mass emission limitation (80 mg/l), but rather serves as a trigger level for maintenance and/or repair activities or further investigation to establish correct operation.]

The selection of 4% (as propane) VOC concentration as a threshold to trigger maintenance was based on an equivalency to 80 mg/l (per the 1995 API study *Vapor Recovery Units at Gasoline Distribution Facilities, Mass Emission Rate / Emissions Monitor Concentration Correlations & Hazardous Air Pollutants Speciation Data* – specifically, Figure 16 of the report correlates an average 6-hr test vent concentration of 4% HC concentration (as propane) to an average 6-hr test emission rate of 80 mg/l for carbon adsorption units).

By requiring maintenance or repair when an *instantaneous* reading of 4% is obtained, the unit is subject to corrective action on a more aggressive basis than the compliance limit of a *6-hour average* concentration in excess of 80 mg/l. A violation would only be deemed to have occurred if the required corrective action were not taken.

We believe that this is the type of monitoring program that would be effective and appropriate for area sources in the gasoline distribution industry.

2) Subpart WW and NSPS Kb Should Be Specified as Equally Acceptable Alternatives.

a. Precedent for Specifying Alternative Compliance Options.
Part 63 Subpart WW represents the most recent rendering of EPA's language for the control of floating roof tanks. In the promulgation of subsequent regulations that have storage tank provisions, EPA has cited Subpart WW for the storage tank control requirements (*e.g.*, OLD MACT[1] and the MON[2]). Through these more recent rulemakings, EPA has published their determination that the requirements of NSPS Kb may be superseded by the requirements of Subpart WW.

In the event that a tank is subject to both OLD MACT and NSPS Kb, the tank was required to comply with the requirements of Subpart WW [§63.2396(a)(1)(i)]. Recently finalized amendments to OLD MACT, however, have revised §63.2396(a) to allow compliance with either Subpart WW or NSPS Kb in the event of an overlap [71 FR 42898 (July 28, 2006)].

In the event that a tank is subject to both the MON and NSPS Kb, the tank may comply with either Subpart WW or NSPS Kb [§63.2535(c)].

Two principles are evident in these regulations:

i) Part 63 Subpart WW is considered at least equivalent in stringency to NSPS Kb.

ii) In the event of overlapping rules that are equivalent in stringency, EPA has allowed the owner or operator the option of complying with either one of the rules.

b. Issues under NSPS Kb that are clarified in Subpart WW.
The following list illustrates issues that are problematic under NSPS Kb but addressed with more clarity and certainty under Part 63 Subpart WW. This list is not necessarily complete.

[1] 40 CFR Part 63 Subpart EEEE–*National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)*; §63.2346(a)(3) and Table 2.

[2] 40 CFR Part 63 Subpart FFFF–*National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing*; Table 4.

Issue	NSPS Kb	Part 63 Subpart WW
i) Organization of the rule.	While there are headings indicative of topics, there is overlap between sections (*e.g.*, some design requirements are found only in the inspection provisions).	The rule is clearly organized as to Design, Operational, Inspection Frequency, Inspection Procedure and Repair requirements. §63.1063(a)-(e)
ii) Guidepole controls.	No mention of guidepoles in the rule. Slotted guidepoles are addressed in a FR notice, but without clearly specifying acceptable control options [65 FR 2336 (1/14/00)].	Controls are specified for both slotted and unslotted guidepoles, applicable to both EFRTs & IFRTs. Furthermore, the slotted guidepole requirements exactly match those in the STERPP agreement. §63.1063(vi)&(viii)
iii) Sample wells (deck fittings for the purpose of sampling).	Specifies that sampling shall be via a well with a slit fabric seal for IFRTs, yet FR notice (above) applies slotted guidepole requirements to IFRTs.	Allows a variety of controlled deck fittings for sampling, including a well with a gasketed cover, a well with a slit fabric seal, or a slotted guidepole with appropriate controls. §63.1063(ii),(v)&(viii)
iv) Bolted deck fitting covers.	Specifies that certain IFRT deck fittings shall have bolted covers.	Specifies that such covers shall be "bolted or fastened", thereby allowing for fastening arrangements that may use mechanisms other than bolts.
v) Landed floating roofs.	Uses language which may be read differently for EFRTs vs IFRTs, and which may be read to impose requirements that would actually increase emissions. The preamble to the CAR explains EPA's evolution of intent for this clause, explicitly stating that this clarified intent applies to those rules underlying the CAR (which include Kb), yet Kb retains the problematic language. In the CAR preamble, at 63 FR 57748 10/28/98 (pg 57768, 1st column), EPA stipulates that: 1) Emissions are minimized by "Not requiring emptying the tank if the liquid level falls below the roof supports" and 2) "The intent of the provision . . is to prevent the liquid level from rising and falling while the roof is resting on the supports."	Clearly specifies requirements that impose the intent described in the CAR preamble, and has one set of requirements that applies to both EFRTs and IFRTs. §63.1063(b)(2)
vi) Unsafe to measure EFR seal gaps.	Such scenarios are not addressed.	Specifies procedures to be followed when conditions are unsafe for performing seal gap measurements, similar to the HON and Refinery MACT rules. §63.1063(c)(2)(iv)

Issue	NSPS Kb	Part 63 Subpart WW
vii) Internal inspections of IFRTs.	Although not expressly required, there is an evident expectation that the tank will be emptied and cleaned for this inspection. The emissions associated with tank cleaning would be avoided, however, if this inspection were done in service.	Provides for this inspection being done in service, from the top side of the floating roof, provided that there is visual access to all deck components that are subject to inspection. §63.1063(d)(1) The repair provisions accordingly address both in-service and out-of-service eventualities. §63.1063(e)
viii) Domed EFRTs.	While numerous EPA documents have clarified that a domed external floating roof tank should be considered an internal floating roof tank for compliance purposes, this is not expressly stated in this rule.	Expressly stipulates, in the definition of an internal floating roof, that an external floating roof located in a tank to which a fixed roof has been added is to be considered an internal floating roof. §63.1061
ix) Reporting requirements.	Has differing reporting deadlines, depending upon the event to be reported.	Incorporates the MACT paradigm for reporting, which is to report inspection results only in the event of failures, and to submit all reports on a semi-annual basis. §63.1066(b)&(b)(2)
x) Demonstration of equivalency.	There is no clear guidance on how equivalency is to be demonstrated. EPA has rarely, if ever, granted equivalency under this vague section.	Specifies that equivalency is to be demonstrated on the basis of emission factors, and specifies acceptable test methods for determining emission factors.

3) <u>Control Requirements Should Emphasize Rim Seals and EFRT Guidepoles</u>.

As demonstrated in our memo to you of June 15, 2006, the vast majority of potential emission reductions from floating roofs are associated with the rim seal of IFRTs, and the rim seal and guidepole of EFRTs. All other deck fittings in aggregate make a relatively insignificant contribution to emissions from floating roof tanks. As we noted in our memo of June 15, 2006, appropriate controls for guidepoles are specified in Part 63 Subpart WW.

a. <u>Determination of what constitutes a guidepole (and thus is subject to controls)</u>.
The definition of a guidepole, as given in the STERPP agreement, is as follows:

> A guidepole (also referred to as a gaugepole, gauge pipe or stilling well) is a vertically oriented pipe or tube that is affixed to a tank and that passes through its floating roof.

b. <u>Criteria for other-than-guidepole deck fittings</u>.
Appropriate requirements for other deck fittings may read as follows (this language taken from Subpart WW, but with the gasketing requirements deleted):

Deck fitting design requirements:

- Each opening except those for automatic bleeder vents (vacuum breaker vents) and rim space vents shall have its lower edge below the surface of the stored liquid.
- Each opening except those for automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves, and deck drains shall be equipped with a deck cover.
- Each opening for a fixed roof support column may be equipped with a flexible fabric sleeve seal instead of a deck cover.
- Each opening for a sample well or deck drain (that empties into the stored liquid) may be equipped with a slit fabric seal or similar device that covers at least 90 percent of the opening, instead of a deck cover.

Deck fitting operational requirements:

- Each cover over an opening in the floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall be closed at all times, except when the cover must be open for access.
- Each automatic bleeder vent (vacuum breaker vent) and rim space vent shall be closed at all times, except when required to be open to relieve excess pressure or vacuum, in accordance with the manufacturer's design.

4) Recordkeeping for Equipment Components.

As EPA has previously acknowledged, a detailed physical inventory of each equipment component at gasoline bulk terminals is burdensome and unnecessary. The language of the rule would more clearly communicate EPA's intent to not require such an inventory if it were revised to read as follows [citations are to corresponding paragraphs in the MACT rule, Subpart R]:

> 63.424(b) A log book shall be used and shall be signed by the owner or operator at the completion of each inspection. A section of the log shall contain a summary description or general diagram(s) of the physical assets in gasoline service at the facility. A detailed list, description, or diagram(s) of all equipment, as defined in 63.421, in gasoline service at the facility is not required.
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> 63.428(f) Each owner or operator subject to the provisions of §63.424 shall submit to the Administrator a description of the types of equipment in gasoline service in the form of a summary description or general diagram(s) of the physical assets in gasoline service at the facility. A detailed list, description, or diagram(s) of all equipment, as defined in 63.421, in gasoline service at the facility is not required. For facilities electing to implement an instrument program under §63.424(f), the report shall contain a full description of the program.

5) Cost Effectiveness of Controls.

a. The cost effectiveness of controls should be evaluated in terms of health risk.
A cost-effectiveness (CE) metric has merit only if it is evaluated in terms of the purpose of the program. For the Area Source Program, the purpose is expressly stated as a "reduction in the public health risks associated with such sources."[3] The effectiveness of the program, then, is the degree to which such risk to public health is reduced. The public health risk posed by a given source category is a function of the cancer potencies for the HAPs emitted by that source category. The cancer potencies of the listed HAPs can vary by a factor of 10,000 times. For a source category that primarily emits an extremely toxic HAP, the appropriate cost-effectiveness threshold might be $1 million/ton HAP. For a source category that primarily emits relatively low-potency HAPs, a similar reduction in cancer incidence per dollar of cost may be achieved at $100/ton HAP. It is readily evident that cost per ton of mixed HAP reduction is not a meaningful measure of the cost effectiveness with which a rule achieves the program goal of reducing risk. In order for the metric to be meaningful in terms of reducing risk, the HAP reductions must be toxicity weighted. In responding to peer reviewer comments on EPA's draft Report on the Environment, EPA recently agreed that tracking total tons/yr of mixed HAPs was flawed because toxicities of the different HAPs was not considered. EPA has now decided to change their air toxic indicator to be based on toxicity-weighted total tons.[4] It is inconsistent for EPA to not also consider toxicity in its air toxic control rules. It is unfair to the exposed public and to the relatively less toxic source categories to not consider toxicity. EPA should not use the flawed CE metric of $/ ton of mixed HAPs because it does not consider the toxicity of the various HAPs.

b. Cost effectiveness may be unacceptable for small facilities.
Preliminary data from one company for 8 small, uncontrolled facilities indicate that the overall capital cost associated with installing vapor processing units for the loading racks would be about $20 million dollars. Applying a capital recovery factor of 0.0944 (based on a 20-year amortization at 7% interest) results in an annualized capital cost of $1,888,000. The overall reduction in HAP emissions would be about 55 tons, and thus the cost per ton of reduction in HAP emissions would be over $34,000/ton. As noted above, this calculation should be further weighted for toxicity and risk. Consideration of toxicity and health risk would render these controls even less cost effective.

If EPA's cost-effectiveness analysis concluded that all new vapor control devices would be carbon units, on the basis that these units always result in a net savings to the owner/operator, that conclusion should be reevaluated in that the assumed net savings are

[3] Clean Air Act §112(k)(1).
[4] From EPA's March 2006 response to peer review comments on the Report on the Environment at: http://cfpub.epa.gov/eroe/index.cfm?fuseaction=main.peerReview :
Peer review Comment: "...air toxics can be reported as toxicity-weighted emissions to relate to potential for causing human health effects."
EPA Response: "...toxicity-weighted emissions (sum of the 188 toxic pollutants) were added." Page 2 of Air Chapter.

not always realized in actual practice. EPA should show separately the cost-effectiveness for combustion units, since those units are sometimes chosen for situations where the higher initial capital cost and on-going maintenance considerations of a carbon unit are not justified. EPA should acknowledge that real-world business decisions being made today demonstrate that carbon systems are not always judged to be a cost effective choice.

6) Health Risk Considerations.

The regulation of area sources under section 112 is fundamentally a risk based program. As stated in 112(k)(1), Congress declared "[i]t is the purpose of this subsection to achieve a substantial reduction in emissions of hazardous air pollutants from area sources and an equivalent reduction in the public health risks associated with such sources". The legislative history reinforces the view that the fundamental purpose of the area source program (encompassed in sections 112(c)(3), 112(d)(5), and 112(k)(3)) is a risk reduction. The report of the Senate Environmental and Public Works Committee gave a concise overview of how the various sections of the statute should work together to address risk from area sources. The committee stated:

> The legislation contains an integrated program to reduce risk from area sources of the same 191 listed hazardous air pollutants. In addition to listing major sources for MACT standards, the administrator shall also list area sources for technology-based standards where the Administrator [sic] it is warranted. The Administrator may require area sources to install MACT, but also has the option to impose less stringent emissions limitations reflecting generally available control technology.
>
> As a second element addressing the area source aspect of the problem, the Administrator is to prepare a national urban air toxic strategy to reduce risk from area sources. (emphasis added) Senate Rep. No. 101-228 (1989) at p. 150.

It is clear that Congress intended sections 112(c)(3), 112(d)(5), and 112(k)(3) be read together as one integrated program, and that the fundamental purpose of the area source program is risk reduction. While 112(d)(5) read alone may suggest that it is exclusively a technology standard, when read as part of the "integrated program" to regulate area sources the area source program should incorporate risk.

To incorporate the overriding Congressional concern for risk reduction, EPA should incorporate risk in its consideration of cost effectiveness. In short, any controls which do not contribute to significant reductions in risk cannot be considered cost effective.

7) Urban Versus Nationwide Rule Applicability.

As noted previously, Congress set forth the purpose of the Area Source Program in paragraph 112(k)(1) of the CAA. This paragraph stipulates that the purpose of the program is to address "risks to public health in urban areas." More specifically, it addresses reduction of hazardous air pollutants in "large urban areas." The Area Source Program is also delineated as being urban in scope in paragraph 112(c)(3) of the CAA, and subparagraph 112(k)(3)(A) describes the program as "a comprehensive strategy to control emissions of hazardous air

pollutants from area sources in urban areas." EPA should correspondingly limit the applicability of area source rules to the urban areas for which the program is intended, or provide clear justification for proposing nationwide applicability based on the regulatory criteria defined in the Clear Air Act.

API appreciates the opportunity to provide these comments. Please contact me at 202-682-8319 or toddm@api.org if you have any questions or comments.

Sincerely,

Matthew Todd
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CC (email): API Air Toxics Task Force
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