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June 13, 2008

The Honorable Stephen L. Johnson
Administrator
U. S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Request for an Administrative Stay of Two Narrow Aspects of the Recently-Signed New Source Performance Standards for Petroleum Refineries

Dear Administrator Johnson:

The American Petroleum Institute (API), the National Petrochemical and Refiners Association (NPRA), and the Western States Petroleum Association (WSPA) are writing to request an immediate administrative stay of specific elements of the recently-signed New Source Performance Standards (NSPS) Subparts J and Ja for Petroleum Refineries.[1] We appreciate EPA's hard work on this rule and concur with the majority of what the Agency has accomplished. We particularly appreciate the opportunity to have worked closely with EPA during the development of the rule and the Agency's willingness to entertain our ideas and suggestions.

We are concerned, however, that certain specific provisions in the final rule will be much more difficult and costly to meet than EPA anticipates. More importantly, because key provisions in the final rule were not raised in the proposed rule, many companies now face

[1] As detailed below, the specific provisions that we request to be stayed are: § 60.100(b) (specifically, stay the words "as defined in § 60.101a"); § 60.100a(c), which defines "modification" for flares; § 60.101a, the definition of "flare" (or, more specifically, the words "piping and header systems" in the definition of flare); § 60.102a(g)(1) as it applies to flare systems (sulfur emissions limits); § 60.102a(g)(3), flow limit on flare systems; § 60.102a(g)(2), the NOx limit for process heaters; and requirements (such as monitoring, recordkeeping, notification, and reporting) that directly relate back to these specified provisions. Note that citations in this letter refer to the final preamble and rules, including corrections pursuant to the Inadvertent Errors Memo (*See, infra* footnote 2).

immediate compliance deadlines that they have had no opportunity to plan for and, thus, will have little or no ability to meet. As shown below, EPA has plainly acknowledged that several key provisions were adopted without having been proposed. EPA's decision to forego the mandatory rulemaking requirements specified by § 307(d) of the Clean Air Act weighs heavily in favor of granting a stay at least for the period necessary for administrative reconsideration.

We believe that the problems can easily be fixed in a way that will not diminish the substantially greater environmental protections that will be accomplished under the new rule. We intend in the very near future to request administrative reconsideration of parts of the final rule and stand ready to work closely with the Agency to expeditiously develop solutions. In the meantime, a targeted stay directed at specific aspects of the rule is necessary, wholly justified, and well within EPA's authority.

API, NPRA, and WSPA are national trade associations whose member companies are involved in all aspects of the oil and natural gas industry, including petroleum refining. Thus, our member companies are directly affected by NSPS Subparts J and Ja.

I. Provisions Relating to Flaring

The final rule sets forth certain requirements related to flares and flaring that did not appear in the proposed rule and go far beyond those provisions set forth in that proposal. These include the definitions of "flare" and "modification," as well as substantive provisions concerning limits on emissions and fuel flows and monitoring requirements. These new provisions will make it all but impossible for companies to engage in routine projects needed for the safe and efficient operation of refineries without: (1) initiating the installation of equipment that has not been shown to meet BDT and is not cost-effective, while requiring substantial capital investments; and (2) risking potential noncompliance with the new rule.

a. The Definitions of Modification and Flare: A "modification " is defined to occur when: (1) any new piping from a refinery process unit or fuel gas system is physically connected to the flare (*e.g.*, for direct emergency relief or some form of continuous or intermittent venting); or (2) a flare is physically altered to increase the flow capacity of the flare. There is no indication in the proposed rule or supporting record that EPA was thinking of adopting such a sweeping definition of modification in the final rule.[2] This new definition will serve as a barrier to projects needed to enhance the safety and reliability of ongoing refinery operations. In

[2] In formulating technical corrections to the rule, EPA admitted as much: "Finally, the final rule also includes, without having proposed to do so, a new provision defining what constitutes a modification of a flare." Memorandum from Robert J. Meyers, Richard B. Ossias, and Brian F. Mannix, to the Administrator, Inadvertent Errors in the Final Amendments to the New Source Performance Standards for Petroleum Refineries (NSPS Subpart J) and the Newly Promulgated New Source Performance Standards for Petroleum Refineries (NSPS Subpart Ja) (June 9, 2008) (Inadvertent Errors Memo) at 2.

addition, it raises difficult legal and compliance questions and virtually guarantees that every flare system will become subject to the rule at or soon after promulgation. Our greatest concerns include the following:

1. In modern refineries, flare systems are an integral part of the facility's safety system. All companies routinely make new connections to flaring systems, for example, to accommodate new relief valves on process equipment, to accommodate changes to existing relief systems (such as tying in a new, larger relief valve), and tying in existing atmospheric vents to reduce worker exposure and improve process safety. The new definition of modification may create a substantial disincentive for such necessary safety projects.

2. Flare systems also are used to capture and reduce emissions that formerly would have been vented uncontrolled to the atmosphere. For example, most refineries have dedicated programs for identifying and controlling existing uncontrolled sources of VOC emissions. Often, the most efficient and effective way of controlling such miscellaneous sources is to tie them into a flare system. These environmentally beneficial projects (which, as noted above, often also improve process safety and reduce workplace exposure) are strongly discouraged by the new definition of modification.

3. The new definition of modification inexplicably would apply to projects designed to improve flaring systems and reduce the amount of material vented to a flare – most notably, the installation of flare gas recovery systems and the installation of new connections to a flare systems served by a flare gas recovery system. Many such projects will be undertaken over the next few years for reasons that are unrelated to NSPS Ja, but that support the policy behind the new rule of improving the performance of flare systems and reducing their potential environmental impact.

4. The expansive breadth of the new definition of modification virtually assures that all existing refinery flare systems will be modified soon after the effective date of the final rule, unless the facilities adopt radical changes to their ongoing maintenance, engineering, and construction programs. Such changes, even if technically feasible, may hold up or eliminate projects to improve safety, health, environmental control, efficiency, and reliability.

5. The final rule does not specify how the new definition of modification relates to the generally applicable definition provided in § 60.14. If the new definition supplements the existing definition, certain ambiguities must be resolved before implementation (*e.g.*, is a new connection a "modification" if there is no emissions increase from the flare system). If the new definition completely replaces the existing definition, then EPA has failed to explain why certain key provisions were set aside (such as the exclusions for routine maintenance and for

small capital improvements). Regardless of the approach, it makes no sense for the definition of "modification" to sweep in the many projects that must continually be implemented at refineries to assure worker and process safety, improve the efficiency of existing operations, and promote the reliable operation of existing production units.

These problems are exacerbated by the new definition of "flare," which now encompasses not only the flare tip, burner, igniter and flare controls (as has been typical in EPA standards applicable to flares) but also the piping and header systems. This expansive definition contributes to many of the problems described above regarding the definition of "modification." For example, if the definition of "modification" were limited to specified physical changes to the flare itself and the equipment immediately associated with the flare, then improving process and worker safety by tying a new vent line into a flare header system would not be subject to and, therefore, not discouraged or impeded by the new rule.

As with the definition of modification, there was no indication in the proposed rule or related materials that EPA intended to expand the definition of flare to include the entire flare header system.[3] Had these provisions been included in the proposed rule, commenters would have been able to explain to EPA the problems that have now been created and helped the Agency develop alternative approaches that better balance environmental protection with the equally compelling needs for worker safety, process safety, and plant efficiency and reliability.

In a related, but highly significant change, the new definition of "flare" was inserted into the applicability provisions of NSPS J, with the result that EPA has substantially and retroactively expanded the applicability of NSPS J to existing sources – well beyond historical bounds – such that it now conforms to the new NSPS Ja.[4] Because the proposed NSPS Ja rule

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[3] Again, EPA has conceded as much: "While we required a flare gas minimization plan and elimination of routine flaring in the proposal, these were requirements that applied to modified, constructed and reconstructed fuel gas producing units, not flares. In addition to changing the affected source ...." Inadvertent Errors Memo at 1. A similar concession is made in the preamble to the final rule: "Furthermore, while some of the requirements that were proposed for the fuel gas producing unit were transferred to the flare as an affected source, the scope of these requirements changed significantly when they were applied to a flare rather than a fuel gas producing unit." Preamble at 89.

[4] This change appears in § 60.100(b). Note that the new definition of "modification" was not inserted into NSPS J. However, in an April 10, 2008 applicability determination, EPA advised that it believes the § 60.14 modification provisions should be applied in an expansive and unprecedented manner, resulting in a purported approach to modifications under NSPS J that essentially mirrors the approach adopted in NSPS Ja. *See* Letter from Ken Gigliello, Acting Director, Compliance Assessment and Media Program Division, Office of Compliance, U.S. EPA, to Julie R. Domike (Apr. 10, 2008).

did not provide any indication that NSPS J or Ja would expand the definitions of "flare" and "modification," companies implementing projects since the date NSPS Ja was proposed[5] could not design these projects with an eye toward the ultimate compliance requirements. As a result, this change to NSPS J will create immediate, unavoidable, and likely unattainable compliance obligations for numerous refineries immediately upon publication of the final rule.

b. Substantive Obligations: Under the final rule, owners and operators of affected fuel gas combustion devices (which include flares) must meet specific emission limits on SO_2 or limits on H_2S content in any fuel gas burned. Flare systems also are subject to a gas flow rate limit of 250,000 scf/day, with specified exceptions. Owners and operators of covered flares also must install, test and operate instruments to monitor and record reduced sulfur in flare gas and flare gas flow rates.

The proposed rule did not contain certain of these requirements (*e.g.*, the monitoring requirements for flow and reduced sulfur compounds[6]) and provided little explanation justifying the rest. Aside from these rulemaking problems, these requirements will impose extremely onerous, if not impossible, compliance obligations on affected sources. And, they will impose costs that far exceed the estimates developed in support of the final rule. Our greatest concerns include:

1. The final rule caps flow through flare systems at 250,000 scf/day, with only limited and specific exceptions. Facilities that cannot meet this cap likely will need to modify an existing, or install a new or replacement, flare gas recovery system. This flow limit will be virtually impossible to meet for operators of large flares because the sweep gas flow rate alone for many large flares approaches 250,000 scf/day. This means that, for such systems, there is virtually no "head room" under the flow limit to accommodate additional non-exempt material that may be vented into the flare header system.

2. This problem will be greatly magnified if the Agency interprets the rule such that flow attributable to startup and shutdown counts against the flare system flow cap. If this is the case, even systems with relatively low sweep gas rates will not be able to meet the cap if the corresponding refinery operations necessarily rely on the flare system during startup and shutdown. EPA observes in the preamble that

[5] Note that the change in § 60.100(b) on its face would apply the new definition of flare to projects implemented since *proposal of NSPS J* – all the way back to June 11, 1973. Although the words of the rule seem to dictate this result, this surely cannot be what EPA intended to accomplish. This ambiguity alone creates a compelling need to stay this provision.

[6] EPA has acknowledged, "[W]e added new requirements for flare gas minimization that were not proposed, including monitoring flow and sulfur content ...." Inadvertent Errors Memo at 1-2.

most refineries should be able to eliminate or significantly reduce emissions to flare systems from startup and shutdown. We believe this cannot reasonably be accomplished at many potentially affected refineries and that the rulemaking record does not support the Agency's conclusions. While it is not clear whether EPA will adopt the view that flow from startup and shutdown counts against the flare system flow cap, our request for a stay of the flare system flow cap is separately and independently grounded on the possibility that flow from startup and shutdown will be counted against the cap.

3. Numerous refineries have installed or are planning to install flare gas recovery systems pursuant to consent decrees negotiated with EPA. In some cases, these systems are not consistent with the flare gas recovery requirements that might be needed to assure compliance with the final rule, which raises the prospect that the NSPS might impose incrementally more stringent requirements that would unreasonably magnify the cost and difficulty of designing and implementing flare gas recovery systems.

4. The final rule requires flow monitoring in flare systems and requires reduced sulfur compound monitors to assure that flares comply with the 500 lb/day SO2 limit triggering the need for root cause analysis. Neither of these flare monitoring requirements was included in the proposed rule. In addition, continuous reduced sulfur compound monitors are undergoing pilot testing, but have not been proven in any permanent refinery flare application. This monitoring requirement is inconsistent with the obligation for NSPS requirements to be "demonstrated" and will make it impossible for affected facilities to comply if the system cannot be successfully applied in practice.

5. Installing new monitors will create widespread operational disruptions not anticipated by EPA because, in most refineries, new taps will be needed in the flare systems to accommodate the monitoring systems. "Hot tapping" flare systems (*i.e.*, installing the taps while the flare systems are still in service) is unsafe because the tapping operation could ignite flammable materials flowing through the system, which could result in fires, explosions, and corresponding harm to workers, the physical plant, and possibly surrounding communities. As a result, many refineries will not allow such "hot tapping," which means that all equipment served by a flare system (which in most refineries includes the majority of the key production units) would have to be shut down or otherwise safely isolated from the flare system during the period needed to purge the flare system and install the new instrument taps. Aside from the safety, environmental, and operational difficulties associated with unplanned refinery outages,[7] the

[7] Again, the new definition of "modification" will cause many refineries to unexpectedly trigger the NSPS at or soon after the time the rule becomes effective because the new provisions

probable need to shut down refinery operations throughout the United States was not factored into the justification for the final rule.

6. Approximately 450 flares are currently in use in the U.S. petroleum refining industry. If most or all of these flares become subject to the new NSPS flare monitoring provisions (which, as explained above, would be expected under the new definition of modification), we are concerned that instrument suppliers will not have the capacity to produce and install the substantial number of the monitors that would be needed soon after the effective date of the rule. This is a practical concern that EPA did not consider in the rulemaking and that could stand to frustrate compliance efforts.

7. We estimate that it will cost about $1 million per flare to meet the new NSPS monitoring requirements. This means that monitoring requirements alone could cost the industry close to half-a-billion dollars. Such costs simply are not economically justified in light of the nominal emissions reductions predicted to be achieved by the new flare requirements. In any event, EPA did not factor such costs into the economic analyses developed in support of the final rule.

c. A Targeted Stay Will Not Cause Harm to Human Health or the Environment: Flares and flare systems already are subject to numerous applicable requirements under the Clean Air Act. Under these programs, flare use is already tightly limited and controlled. There is no compelling evidence that flares currently pose any significant threat to health and the environment; thus, maintaining the status quo during EPA's reconsideration of the provisions identified above will not perpetuate an existing harm or create any new harm to human health or the environment. Notably, refinery operators have substantial (and growing) economic incentive to efficiently utilize their raw materials and processes. Thus, economics alone provides a powerful driver for minimizing the amount of material that is vented to flare systems and combusted in flares.

d. Specific Request: We request a stay of the following specific provisions: § 60.100(b) (specifically, stay the words "as defined in § 60.101a"); § 60.100a(c), which defines "modification" for flares; § 60.101a, the definition of "flare" (or, more specifically, the words "piping and header systems" in the definition of flare); § 60.102a(g)(1) as it applies to flare systems (sulfur emissions limits); § 60.102a(g)(3), flow limit on flare systems; and requirements (such as monitoring, recordkeeping, notification, and reporting) that directly relate back to these specified provisions.

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were not announced in the proposed rule and such provisions will substantially expand the number of facilities affected by the new rule.

II. NOx Limits for Process Heaters

a. Concerns With the Process Heater NOx Limit: The proposed rule set out four options for limiting NOx emissions from process heaters. For process heaters with a heat input of 20 mmBtu/hr or more, a limit of 80 ppm was proposed on the grounds that the other three options were not cost effective. The final rule, however, set a much more stringent limit of 40 ppm for process heaters with a heat input of 40 mmBtu/hr or more, on the grounds that a revised cost analysis indicated that this option was cost effective. The preamble to the final rule explains that "nearly all process heaters at refineries that will become subject to subpart Ja can meet [this standard] using combustion controls (LNB or ULNB)."[8]

Our data show that the new standard will be difficult or impossible to meet for many units without the installation of a selective catalytic reduction (SCR) system. Moreover, even with SCR, there is a serious question whether certain units can continuously meet the final standard. In addition, for units being constructed in reliance on the proposed standard, significant re-engineering is needed and substantially greater costs will be incurred in meeting the tighter standard in the final rule. Lastly, EPA justified the final rule, in part, by pointing to a similar rule implemented in the Bay Area Air Quality Management District (BAAQMD). However, that rule is substantially different than EPA's final rule and, thus, does not serve as a reliable basis for EPA's final rule. These issues are detailed below:

1. There is no doubt that advanced burner technology – including LNB and ULNB – can in some cases consistently achieve the emissions limits specified in the final rule. However, for a significant number of process heaters, advanced burner technology will not assure compliance with the rule. For example, units with air preheaters almost certainly will need SCR to comply with the final rule because the higher temperature of the inlet combustion air reduces the effectiveness of advanced burners. Of course, air preheaters make the unit more efficient because some of the energy in the exhaust is captured instead of being lost to the atmosphere, thereby reducing greenhouse gas emissions. Therefore, the final rule, in the interest of achieving only incrementally higher levels of NOx control, will actually raise a barrier to the future installation of more fuel efficient process heaters. We estimate that 50% of the process heaters that may be affected by the rule will not be able to comply using advanced burners.

2. Even with SCR, we are concerned that certain process heaters still will not always be able to comply with the limits in the final rule. For example, many process heaters are designed such that combustion efficiency is greatest at or near the full capacity of the unit. Therefore, when these units are turned down, NOx emissions can significantly increase. Even though an SCR will still achieve high levels of

[8] Preamble at 60.

control under these conditions, we expect that it would be difficult or impossible to meet the new NOx limit in many cases.

3. We also have great concern about process heaters that were designed or constructed after the date of the proposed rule but before the final rule was signed. Because these units will be new sources under the new rule, they must immediately meet the standard once it becomes effective or upon startup of the unit. In anticipation of the new NSPS requirements, owners and operators designed such units to be able to meet the proposed standards. If EPA requires such units to instead meet the more stringent NOx limits in the final rule, many companies will be put in an impossible compliance situation because their units simply will not be able to meet the new standard without costly and time-consuming redesign and retrofits.

4. Lastly, the more stringent NOx limit in the final rule appears to be based in part on BAAQMD Regulation 9, Rule 10, which requires process heaters to meet a NOx limit of 0.033 lb/mmBtu. Reliance on this rule is misplaced, however, because compliance with the BAAQMD rule is determined on a facility-wide basis. This approach allows different levels of performance across all process heaters at a facility, provided the standard is met on average for the facility. The final NSPS limit applies on a unit-specific basis, which demands the same level of control for all affected units and effectively makes the NSPS a much more stringent standard than the BAAQMD rule.

We believe that these problems can easily be rectified and we look forward to working with the Agency through the reconsideration process to find effective solutions. But, in the meantime, we believe that the process heater NOx limit must be stayed to avoid the problems detailed above.

b. A Targeted Stay Will Not Cause Harm to Human Health or the Environment: As with the flare requirements, a stay of the process heater NOx limit will not result in any harm to human health or the environment. Process heaters already are subject to a wide-array of effective NOx limitations under the various applicable state and federal programs. There is no evidence that staying the incrementally greater level of control provided by the final rule will accomplish substantially greater protection to human health or the environment than the existing regulatory programs. In addition, a stay is good policy because it would prevent potentially unavoidable noncompliance with the rule and would avoid erecting disincentives to the installation and use of more energy efficient process heaters.

c. Specific Request: We request a stay of the following specific provisions: § 60.102a(g)(2), the NOx limit for process heaters; and requirements (such as monitoring, recordkeeping, notification, and reporting) that directly relate back to these specified provisions.

III. Legal Authority for a Stay

Pursuant to Clean Air Act § 307(d)(7)(B), 42 U.S.C. § 7607(d)(7)(B), where it was impracticable to raise an objection during the period of public comment or if the grounds for such an objection arise after the public comment period, and if such objections are of central relevance to the outcome of the rule, EPA is authorized to reconsider the rule. EPA is authorized to stay the effectiveness of rules promulgated under the Clean Air Act for up to three months to accommodate the time needed for administrative reconsideration. *Id.* As noted above, the key provisions cited in this letter were not included in the proposed rule, and, thus, there was no opportunity to comment on them. Further, such provisions are of central relevance to the rule and the ability of companies to comply. Therefore, we plan to seek such reconsideration at the earliest practicable time. Given the risks and potential liability the industry now faces, however, an immediate stay is necessary and appropriate.

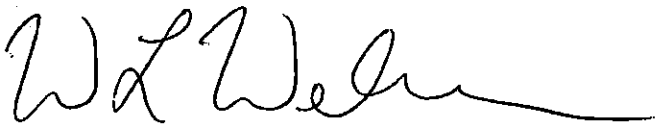
In addition, EPA has authority to suspend the effective date of these provisions through its general rulemaking authority, and should do so immediately to allow for reconsideration of the two provisions.

IV. Conclusion

We appreciate the opportunity to have worked closely with EPA during the development of this rule. Working together produced a better and stronger rule than otherwise would have been the case. We believe that workable solutions to our remaining concerns can rapidly be devised and that these solutions will not diminish the substantial additional environmental protection afforded by the rule. We also strongly believe that a targeted stay of the two narrow provisions addressed in this letter is necessary, wholly justifiable, and supports our shared responsibility to protect the environment.

With the impending publication of the final rule, we are anxious to speak with you about this request as soon as possible. We will contact you immediately to arrange for a call or a meeting to discuss these important issues. In the meantime, please feel free to call me at 202-955-1637 if you have any questions.

Sincerely,



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cc: R. Meyers
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