

FINDING OF EMERGENCY

EMERGENCY REGULATORY AMENDMENT DELAYING JANUARY 1, 2005 IMPLEMENTATION DATE FOR THE DIESEL FUEL LUBRICITY STANDARD

INFORMATIVE DIGEST OF EMERGENCY REGULATORY AMENDMENT

Section Affected: Amendment to section 2284, title 13, California Code of Regulations (CCR).

Background:

Section 2284, title 13, CCR is a new Air Resources Board (ARB or Board) regulation adopted following a July 23, 2003 public hearing. It phases in a minimum lubricity standard for motor vehicle diesel fuel starting January 1, 2005. By operation of section 93114, title 17, CCR, the ARB standard will also apply to diesel fuel used in nonvehicular sources other than marine vessels and locomotives. Diesel fuel lubricity represents the ability of the fuel to provide surface contact lubrication. Adequate levels of fuel lubricity are necessary to protect the internal contact points in fuel pumps and injection systems in diesel engines. The Board adopted the lubricity standard at the same time it adopted an ultra-low sulfur content standard of 15 parts per million (ppm), to be phased in starting in June 2006. Regulations of the U.S. Environmental Protection Agency impose essentially the same sulfur requirement and implementation date for diesel fuel used in on-road vehicles. The more severe hydrotreating necessary for reducing fuel sulfur to this level is expected to reduce the natural lubricity of the diesel fuel. There is no comparable federal lubricity standard for diesel fuel.

The ARB's lubricity standard permits a maximum wear scar diameter (WSD) of 520 microns based on a High Frequency Reciprocating Rig (HFFR) test method. Earlier this year, the American Society for Testing and Materials (ASTM) – a non-profit organization that sets consensus-based standards – added the same lubricity standard to its ASTM D 975 specifications for motor vehicle diesel fuel starting January 1, 2005.

If the natural lubricity of a batch of diesel fuel is insufficient to meet a targeted lubricity level, refiners use a lubricity additive. During implementation of the ARB's statewide diesel fuel sulfur content standard of 500 ppm in 1993, the Governor appointed a diesel fuel task force to address various issues that arose. One of the task force's recommendations was that refiners and importers should meet a voluntary lubricity standard of 3000 grams using the Scuffing Load Ball-on-Cylinder Lubricity Evaluator (SLBOCLE) test. Subsequent monitoring by ARB staff has indicated that refiners are meeting this standard, which is somewhat less stringent than the standard imposed by the new lubricity regulation.

Since the 1993 implementation of the statewide 500 ppm sulfur standard, California refiners have used lubricity additives in a significant portion of the state's diesel fuel.

The refiners have been adding the additives to diesel fuel at the refinery – before it is shipped through the pipeline system – since this has been the most efficient and cost-effective approach. The use of lubricity additives is expected to become more widespread with implementation of ARB’s lubricity standard, with modest increases in the treat rates. Refiners were expecting to continue their practice of additizing diesel fuel at the refinery. However, because of recently-raised concerns that lubricity additives in diesel fuel shipped by pipeline could contaminate subsequent shipments of jet fuel, the operator of California’s primary common carrier pipeline announced on November 5, 2004, that it will only permit the transport of California diesel fuel treated with the type and amount of additive consistent with regular practices in the past years. While the operator would on an expedited basis be equipping its terminals with diesel fuel additization blending equipment that would allow the additives to be added after the diesel fuel was shipped through the pipeline, installation of the equipment could not be completed by January 1, 2005. Pending installation of the terminal additization equipment, refiners have very limited options for complying with the new lubricity standard when increased levels of lubricity additives are needed for diesel fuel being shipped by common carrier pipeline.

The Emergency Regulatory Amendment

The current phase-in dates for the lubricity standard in section 2284(a), title 13, CCR, are January 1, 2005 for diesel fuel being supplied from the production or import facility, February 15, 2005 for diesel fuel being supplied from terminals, and April 1, 2005 for diesel fuel being sold at fueling facilities or supplied from bulk plants. For the reasons set forth below, the ARB Executive Officer is adopting an amendment delaying these implementation dates for 120 days, until May 1, 2005. Diesel fuel marketed as having a maximum sulfur content of 15 ppm is not covered by this delay.

NEED FOR IMMEDIATE ACTION

Under the California Administrative Procedure Act and state regulations, state agencies are normally required to submit a hearing notice to the Office of Administrative Law (OAL) at least 55 days before a hearing to amend a regulation, so that it can be published in the California Notice Register at least 45 days before the hearing. However, an agency is authorized to amend a regulation on an emergency basis without following the regular procedural requirements upon a finding that the amendment “is necessary for the immediate preservation of the public health and safety or general welfare.” OAL has an abbreviated 10-day period to review the amendment after it is submitted by the adopting agency, and the amendment may go into effect immediately after it is approved by OAL and filed with the Secretary of State. An amendment adopted on an emergency basis may remain in effect for no more than 120 days unless the adopting agency complies with the procedural requirements for a normal amendment. (Government Code section 11346.1.)

When diesel fuel containing an additive is shipped through a multi-product pipeline after it leaves the refinery, there is a possibility that subsequent fuel shipments could be

contaminated with additive retained on the pipeline walls – a phenomenon sometimes referred to as “trail back.” Some airline companies and jet engine manufacturers have recently expressed concerns that trail back could contaminate jet fuel with lubricity additives from preceding shipments of diesel fuel. Their concerns focus on the unknown effects of these additives on jet fuel and possible impacts on jet engine safety, performance and durability. On October 22, 2004, two ASTM subcommittees met to discuss the potential for lubricity additive contamination of jet fuel. Preliminary data were presented showing the potential for additive trail back and potential detrimental effects of some lubricity additives on jet fuel. A few days earlier, Colonial Pipeline – the operator of the largest pipeline system on the East coast – had announced it would not allow lubricity additive-treated diesel fuel on its pipeline system starting January 1, 2005. Also, on October 22, 2004, ASTM issued a ballot that, if passed, would modify the effective date of the ASTM D 975 lubricity standard from January 2005 to January 2006.

Representatives of Kinder Morgan Energy Partners, L.P. (Kinder Morgan) – California’s primary common carrier pipeline operator – attended the October 22, 2004 meeting. On October 26, 2004, Kinder Morgan notified shippers on its pipelines that, effective immediately, the firm would no longer accept shipments of diesel fuel containing lubricity additives because of the possibility of jet fuel contamination due to trail back. This announcement resulted in considerable alarm for those refiners needing to additize some or all of their diesel fuel in California. It did not affect California diesel fuel shipped through proprietary (refiner-owned) pipelines or distributed at the refinery. But more than half the state’s diesel fuel is shipped through Kinder Morgan pipelines, and the announcement meant that, when lubricity additives are needed for this fuel, the additives would have to be added after the fuel was shipped through the pipeline system. The options for doing this immediately were very limited, with the consequence that supplies of California diesel fuel could be disrupted almost immediately. Using additive injection equipment at the terminal racks would be the method of choice, but time is needed to obtain permits and order and install the equipment.

Intense discussions ensued at once among oil producers, regulatory agencies, and the pipeline operators. As a result, on November 5, 2004, Kinder Morgan notified shippers that in order to avoid a disruption in the supply of compliant fuel to terminals served throughout California, the pipeline operator will permit the transport of California diesel fuel treated with the type and amount of additive consistent with regular practices in the past years. Additionally, on an interim basis, Kinder Morgan will coordinate product shipments such that jet fuel will not follow additized diesel fuel in the pipeline. These policies are in effect until fuel additization blending equipment can be installed at the terminals.

In the November 5, 2004 announcement, Kinder Morgan also requested a delay in the January 1, 2005 implementation date for the ARB’s lubricity standard. In order to meet the January 1, 2005 lubricity standard, at least some California refiners will have to increase the percentage of diesel fuel that is additized and the treat rate for the lubricity additive. Kinder Morgan’s policy announced November 5 does not permit diesel fuel

containing increased levels of lubricity additive to be shipped on the operator's California pipelines. Those refiners would have to additize their diesel fuel after it is shipped through the Kinder Morgan pipelines in order to comply with the new lubricity standard as of January 1, 2004.

In order to comply with the new diesel lubricity standard while shipping only nonadditized diesel fuel through California pipelines, terminal operators have started expedited projects to equip the terminals with additive injection facilities. Kinder Morgan requested a delay in the January 1, 2005 compliance date because terminal additization equipment will not be installed and operational for most terminals by January 1, 2005. ChervronTexaco, which has 11 terminals in California from which it supplies diesel fuel, has ordered the necessary equipment and has begun the necessary engineering and permitting activities. However, under the best of circumstances, ChervronTexaco estimates it will require at least the first quarter of 2005 to design, permit, install and commission lubricity additive injection capability in its terminals. Up until October, ChevronTexaco was proceeding on the assumption that it would be able to continue injecting diesel lubricity additive at its two California refineries, as it has done for more than 10 years.

Pending installation of the terminal additization equipment, one alternative for refiners to comply with the lubricity standard would be to produce diesel fuel meeting the lubricity standard – and all of the other ARB diesel fuel standards – without the use of an additive. This alternative is not feasible for much of the state's motor vehicle diesel fuel because lubricity is typically reduced when diesel fuel is subjected to extensive hydrotreating to reduce sulfur and aromatics content to meet the ARB requirements for these properties. While there may be one or more crudes containing a diesel cut that complies with the lubricity standards after processing, the availability, high demand and cost of that crude would likely make this alternative unworkable for many refiners.

Another stop-gap alternative would be to splash blend the lubricity additive directly into trucks at the terminal. However, without true additive injection facilities, "totes" of lubricity additive would need to be manually poured into the truck trailers through the top hatches. This would pose substantial safety and exposure concerns. Moreover, there would be no guarantee that uniform blending would result, making compliance problematic.

A third short-term alternative would be for refiners not to use common carrier pipelines to transport diesel fuel – to only use proprietary pipelines and terminals. But while some refiners may have access to proprietary pipelines and terminals and have adequate fuel sequencing capabilities, logistical constraints limit the amount of diesel fuel that can be transported in this manner and the number of locations to which it can be delivered. Customers may also be unwilling to receive deliveries at alternate terminals that may be some distance from their normal pick-up points.

A fourth alternative would be for refiners to add lubricity additive to the diesel fuel at the refinery and truck all additized diesel fuel from the refinery to terminals or final

destination points. In order to use this option, the refineries must have facilities to load trucks with diesel fuel onsite. While some do, they are likely not designed to handle their entire diesel production. Additionally it is much more time consuming for trucks, at approximately 200 barrels (8400 gallons) a load, to deliver the diesel fuel. The large number of loads required, the turnaround time during peak traffic periods, the distances involved, and the number of trucks needed make this alternative infeasible on an across-the-board basis.

However, no delay is necessary for ultra-low sulfur diesel fuel represented as having a sulfur content not exceeding 15 ppm. All such diesel fuel now being marketed in California is trucked from the refinery, and is kept segregated from diesel fuel not having an ultra-low sulfur content. Thus it is practical for the refiner to fully additize this fuel at the refinery. Moreover, since diesel fuel with an ultra-low sulfur content is likely subjected to the most severe hydrotreating, it has the greatest need for lubricity additives.

The Engine Manufacturers Association (EMA) has commented that there should be no delay in the section 2284(a)(2)(A) requirement that diesel fuel being supplied from a production or import facility meet the lubricity standard starting January 1, 2005, because this fuel would not be affected by Kinder Morgan's decision. However, the lubricity requirement for diesel fuel being supplied from the refinery applies to all California diesel fuel, whether it is to be shipped through a pipeline or dispensed at a terminal at the refinery (section 2284(a)(5) allows shipments of noncomplying unadditized diesel fuel from the refinery as long as the refiner takes the necessary steps to assure that the diesel fuel will be brought into compliance with the lubricity standard before it is supplied from the terminal). In addition, it would not be feasible to maintain the January 1, 2005 lubricity standard just for the portion of diesel fuel that is dispensed into trucks at refinery terminal facilities. Much of this diesel fuel would be in batches that are typically distributed both from a refinery terminal and through a common-carrier pipeline. A refiner would need sufficient storage facilities to segregate the fully additized diesel fuel dispensed at the refinery from the diesel fuel shipped by common carrier pipeline, which would have to be limited to historic levels of additives.

The California Energy Commission's Transportation Fuels Office – which is responsible for gathering, analyzing and interpreting data provided by the petroleum industry and implements the state's Emergency Fuel Allocation Program – has found that the proposed delay in the lubricity standard is necessary to avoid diesel fuel supply disruptions. A representative of the Office testified at the November 24, 2004 hearing that it completely agrees with the findings, conclusions, and recommendations of the ARB staff in this matter.

Based on the foregoing, the ARB's Executive Officer concurs with the recommendations of the staff and the Hearing Officer and finds that the 120-day delay of the implementation dates for the diesel lubricity standard is necessary for the immediate preservation of the public health and safety or general welfare, because failure to adopt the amendment would likely lead to substantial disruptions of diesel fuel supplies in

California. It is expected that no further delays will be necessary because the appropriate additization equipment should be in place and operative at all terminals needing it by the end of the 120-day period.

FISCAL IMPACTS ON STATE AND LOCAL AGENCIES AND SCHOOL DISTRICTS

The Executive Officer has determined that the proposed regulatory action will not create costs or savings to any state agency or in federal funding to the state, costs or mandate to any local agency or school district whether or not reimbursable by the state pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code, or other nondiscretionary savings to state or local agencies.

STATUTORY AUTHORITY AND REFERENCES

This regulatory action is proposed under that authority granted in sections 39600, 39601, 43013, 43018, and 43101, Health and Safety Code, and *Western Oil and Gas Ass'n. v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975). This regulatory action is proposed to implement, interpret, and make specific sections 39000, 39001, 39002, 39003, 39500, 39515, 39516, 41511, 43000, 43016, 43018, and 43101, Health and Safety Code, and *Western Oil and Gas Ass'n. v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975).

Executed this _____ day of December, 2004, at Sacramento, California.

Catherine Witherspoon
Executive Officer