

Air Quality Update

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HEALTH RISK: NEW METHODOLOGY AND POLICY CHANGES AHEAD

California has adopted a new Health Risk Assessment (HRA) methodology that will have broad-reaching consequences for a wide range of regulatory agencies, as well as the regulated community. The methodology is detailed in the Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual, adopted by California's Scientific Review Panel on Toxic Air Contaminants (SRP) at their public meeting on November 12, 2014. The Guidance Manual culminates the science presented in three preceding technical support documents (TSDs) released by OEHHA for the Hot Spots Program since 2008 and reflects advances in the field of risk assessment, along with explicit consideration of infants and children. The California Air Resources Board (CARB) intends to release the finalized Guidance Manual, along with a fully updated companion version of the Hotspots Analysis and Reporting Program (HARP) software, in the first quarter of 2015.

The new method continues to use a tiered approach, which provides flexibility to risk assessors as well as regulatory agencies to implement the new method, but incorporates a more substantive consideration of sensitivities based on site-specific information and age-related exposures. The result is a methodology that generally increases the overall estimates for cancer risk by approximately 200-300% or a factor of 2 to 3 times. So, if previous risk was estimated to be 4 in a million, it

could rise up to 12 in a million with the same emissions. Although developed for the Air Toxics "Hot Spots" Program (AB 2588), the Guidance Manual will have a broader influence, as it affects other regulatory programs that use health risk assessment for policy and regulatory determinations, such as air permitting, the California Environmental Quality Act (CEQA), and Proposition 65.

Risk management policy, set by various state and local agencies, will direct implementation of the new Guidance Manual and define the appropriate use of the HRA methods. In the absence of a moderating policy, the regulated community, lead agencies, and the regulators could experience a large increase of new public notifications, risk reduction requirements, significant public health impacts under CEQA, and equipment across the state that may be difficult to permit.

CARB and other organizations, such as the California Air Pollution Control Officers Association (CAPCOA), are reviewing statewide risk management policies and may propose changes to implementation of risk management statewide. In addition, local agencies are reviewing their policies and may proceed with modifications to those policies. These actions should afford an opportunity for the public to participate in directing implementation of the new Guidance Manual.

However the risk management policies may change, everyone involved with environmental management should have a heightened sensitivity to the air toxics data they submit to agencies for individual devices, facility-wide inventories, and planned de-

velopment projects, because these emissions may be among the first to be evaluated for health risk impacts using the new methodology.

Air Quality Tip

The best time to get involved with a Bay Area Air Quality Management District (BAAQMD) rule that may affect your operations is when the District begins developing the rule. It can often be more difficult to make changes later, such as when the draft rule is introduced at a Workshop, because by then, the rule developer and the District are usually more invested in the developed rule and less receptive to changes. Involvement at the beginning of rule development provides a better chance of having your input considered. Check the District's Rule Development webpage periodically at:

<http://www.baagmd.gov/Divisions/Planning-and-Research/Rule-Development.aspx>

Upcoming Training Offered by Yorke Engineering

- Bay Area Air Quality Regulations, Permitting, and Compliance Seminar: April 21 – April 22, 2015
<http://www.yorkeengr.com/AirQualityClasses.htm>

Upcoming Due Dates for 2015

- USEPA GHG Report 3/31
- CARB GHG >25K Metric Tons 4/10
- CARB GHG 10-25K Metric Tons and All Electric Retailers 6/1
- CARB GHG SF6 Switchgear 6/1
- CARB On-Road Heavy-Duty DV* Reporting for Flexibility Options 1/31
- CARB In-Use Off-Road DV* Annual Reporting for Large Fleets 3/1
- CARB PERP Equipment Units Annual Report 3/1
- Semi-Annual Title V Report Semi-Annually
- Annual Title V Compliance Certification Annually
- Title V – Application for Permit Renewal – Due 180 Days Prior to Permit Expiration

*Diesel Vehicle

PETROLEUM REFINING EMISSIONS TRACKING RULE PROPOSED

Proposed Regulation 12, Rule 15, the Petroleum Refining Emissions Tracking rule, continues to be a work in progress and is expected to be adopted by the BAAQMD Board in the spring of 2015. As drafted, the proposed rule would require Bay Area petroleum refineries to maintain records, monitor air emissions, prepare a baseline Petroleum Refinery Emissions Profile (PREP), and prepare annual emissions inventories and crude slate reports.

Emissions Inventories and Crude Slate Reports

The proposed rule requires ongoing petroleum refinery emissions inventories and crude slate reports covering the previous calendar year. If the rule is adopted as drafted, the first reports would be due to the District on or before September 1, 2016, and every subsequent September 1st. The inventory would provide a summary of the total quantities of each criteria pollutant, toxic air contaminant (TAC), and greenhouse gas (GHG) that was emitted from a petroleum refinery during the inventory period. The crude slate report would provide a record of the types and quantities of crude oil processed over the reported period of time.

In addition, the ongoing report would include a detailed listing of the annual emissions of each air pollutant emitted from each source at the refinery, a complete description of the methodology used for determining these emissions, documentation of the basis for any assumptions used, and a plot plan that clearly identifies the location of each source within the refinery. Emissions resulting from accidental releases would need to be identified, along with the date(s) that the release occurred.

Petroleum Refinery Emissions Profile

In addition to the emissions inventory submitted annually, the proposed rule also requires petroleum refineries to submit to the District a PREP report by July 1, 2018. The PREP is an emissions inventory during a “profile period” that is used as a reference with which to compare the ongoing emissions inventories for later periods of time in order to determine changes in emissions that have occurred at a petroleum refinery.

A PREP will provide an average emission rate, expressed in units of tons or pounds per year, based on actual emissions that occurred during the PREP period, except that a PREP shall not include emissions that exceeded regulatory or permitted limits or emissions from accidental air releases.

The report is to include the identification of the PREP period for each air pollutant included in the PREP, a summary of the average emission rate of each criteria pollutant, TAC, and GHG that was emitted from the refinery during the PREP period, a detailed listing of the average emission rate of each criteria pollutant, TAC, and GHG that was emitted from each source at the refinery during the PREP period, including a complete description for the methodology used for determining these emissions and documentation of the basis for any assumptions used, and a plot plan that clearly identifies the location of each source identified in the PREP.

Emissions that do not meet the definition of PREP under the proposed rule are

excluded from the PREP requirements.

Health Risk Assessment

The proposed rule requires petroleum refineries to submit to the District an HRA for the refinery based on emissions inventory data collected by March 1, 2016. (The current draft rule indicates that 2014 data would be used, but this could be changed to 2015 to align with the first inventory due in 2016.)

Air Monitoring Plans

The proposed rule also requires petroleum refineries to submit to the District a plan for establishing and operating a fence-line monitoring system and a community air monitoring system by December 31, 2015. The plan is to include detailed information describing the equipment to be used to monitor, record, and report air pollutant levels; the siting, operation, and maintenance of this equipment; and procedures for implementing data quality assurance and quality control. The fence-line monitoring system is to be installed within 1 year of approval of the air monitoring plan, and the community air monitoring system is to be installed within 2 years of approval of the plan. Both systems must be operated and maintained in accordance with the approved air monitoring plan, and data from both systems must be reported.

Records of all monitoring information, source test results, material and fuel throughputs, including quantity and composition of crude oil, and other pre-processed feedstocks that are refined must be maintained for a period of at least 5 years.

Yorke Engineering, LLC specializes in air quality and environmental consulting for stationary and mobile sources, including dispersion modeling, health risk assessments, permitting, emission inventories, air quality compliance systems, etc. Yorke Engineering has assisted over 400 customers, including a wide variety of industrial facilities and government organizations throughout California.