

Air Quality Update

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HEALTH RISK ASSESSMENTS

The State of California and Local Air Districts Roll Out New Health Risk Assessment Procedure, Increasing Estimated Risks

The State of California and many local California air districts have now begun adopting and implementing new procedures for preparing health risk assessments (HRAs) for industrial and commercial facilities. The new procedures will impact air toxicity evaluations in four key programs: Permitting, AB 2588, California Environmental Quality Act (CEQA), and Public Noticing (including Proposition 65). Although procedures for preparing HRAs have been around for many years, the State legislature passed a bill in 1999 requiring HRAs to consider the impacts of toxic air contaminants (TACs) on children. Research has shown that children are disproportionately affected by exposure to TACs.

The bill (SB 25) is now taking effect in the form of revisions to the HRA procedures. When adding up the impacts of these revisions, calculated cancer risks will likely increase 2 to 6 times, depending on the type of pollutants emitted.

The California Office of Environmental Health Hazard Assessment (OEHHA) adopted several significant revisions. First, OEHHA incorporated new procedures to account for children's increased probability of developing cancers due to exposure to TACs, known as Age Sensitivity Factors (ASFs). Second, OEHHA incorporated new data on exposure impacts related to revised breathing rate data for adults and children. OEHHA also

updated the exposure duration guidance. HRA preparers no longer need to assume a 70-year exposure duration for residential receptors. Instead, shorter exposure durations may be used, such as 30 years. Workplace receptors may use a 25-year exposure duration.

Permitting

Air district permitting programs will incorporate the new HRA procedures for new or modified equipment when determining compliance with health risk limits. The increased toxic risk estimates may more readily trigger usage limits, the addition of TAC emission controls, and/or public notice. In many cases, default emission factors, which overestimate emissions, should be replaced with more accurate emission factors. If the thresholds are still exceeded, dispersion modeling may also be needed prior to permit application submittal.

Air Toxics "Hot Spots"

Air Toxics "Hot Spots" (AB 2588) programs will also be impacted by the new HRA procedures when larger facilities are required to prepare a new or revised HRA for the purposes of updating their facility-wide risk estimates. The impact of this will result in higher calculated risk values, making it more difficult to remain below public notification and risk reduction thresholds. Again, more accurate emission quantification and dispersion modeling may be used to demonstrate lower risks.

CEQA

CEQA projects may also be affected by the revised HRA procedures. Commercial, industrial, and larger construction projects with HRA requirements will likely be impacted by potential

increases in calculated risk values, thus affecting the public review and public notification processes. In particular, construction projects with large fleets of diesel equipment may have challenges in preparing approved HRAs.

Air Quality Tip

To prepare for the changes to the HRA procedures, if permitting projects are planned in the near future that may result in an increase in TAC emissions, facilities may wish to consider an in-house risk assessment prior to permit application submittal. Also, facilities should be as accurate as possible when providing emissions data to their local air district, since this information can be used to trigger an HRA for AB 2588 purposes. Lastly, stay abreast of your local air district's activities related to the new risk assessment procedures.

Upcoming Training Offered by Yorke Engineering

- South Coast Air Quality Regulations, Permitting, and Compliance Seminar: October 6 – October 7, 2015
<http://www.yorkeengr.com/AirQualityClasses.htm>
- UCI Extension Climate Protection and Environmental Sustainability – Fall Quarter:
<http://unex.uci.edu/courses>
(see Environmental Management)

Upcoming Due Dates for 2015/2016

- SCAQMD 1110.2 Quarterly 10/15/2015
- CARB GHG Verification 9/1/2015
- CARB GHG Cap-and-Trade Annual Compliance Surrender 11/2/2015
- CARB On-Road Heavy-Duty Diesel Vehicle Reporting for Flexibility Options 1/31/2016
- RECLAIM Quarterly (Cycle 1 and 2) 10/30/2015
- Title V – 500-SAM 2/28/2016
- Title V – 500-ACC 3/1/2016 (Except RECLAIM Cycle 2 8/29/2016)
- Title V – Application for Permit Renewal – Due 180 Days Prior to Permit Expiration

RECLAIM AMENDMENTS – NO_x SHAVE IN THE WORKS

In August, the South Coast Air Quality Management District (SCAQMD) proposed specific reductions to Regional Clean Air Incentives Market Trading Credits (RECLAIM RTCs). The proposed rule amendments include a 66% reduction (shave) for major refineries and investors and a 47% shave for power plants and major RTC holders. Other RECLAIM facilities would not have their NO_x credits reduced. The facilities subject to a shave are listed in the proposed Rule 2002 Tables 7 and 8.

Background

Under State law, the RECLAIM program must demonstrate equivalency with traditional command and control strategies. In order to do so, every 3 to 5 years the SCAQMD is obligated to conduct assessments of Best Available Retrofit Control Technology (BARCT) and Reasonably Achievable Control Technology (RACT) for sources in the RECLAIM program. The proposed amendments are intended to bring the NO_x RECLAIM program up to date with BARCT for commercially available NO_x reductions and to implement the control measures in the 2012 Air Quality Management Plan (AQMP).

The SCAQMD adopted the RECLAIM rules in 1993 as an alternative regulatory program to meet the Basin's air quality improvement objectives, providing facilities with flexibility in meeting emission reductions: "Emission reductions can be achieved using add-on controls, modernization, process improvements or by purchasing lower cost emission reductions produced at another facility." (RECLAIM Final Vol. I, 1993, p. EX-3) The RECLAIM program applies to NO_x and SO_x emissions from facilities with actual permitted emis-

sions of 4 tons per year or more, excluding some facilities, such as essential public services. The SCAQMD contacts the facility if they become subject to RECLAIM.

NO_x Reductions

The 2015 BARCT analysis indicated the total "emission reductions are 8.79 [tons per day] tpd" (Preliminary Draft Staff Report, Table EX.1) using add-on control equipment for major sources included in the District's survey. The draft rule proposal specifies a higher, 14 tpd shave.

Rule 2002(i) contains two RTC reduction exemptions but defines very limited cases for eligibility. Note that the exemptions were reportedly not used during the prior NO_x shave.

Proposed Implementation Schedule

The proposed 14 tpd reduction is planned to be implemented as follows: 4 tpd in 2016, and the remainder to be reduced equally from 2018 to 2022.

Other Proposed Amendments

An adjustment account is proposed for newer power producing facilities, to hold RTCs for offsetting the difference between their actual emissions and potential to emit (PTE). PTE is required to be held in accordance with New Source Review requirements. Delay of Relative Accuracy Test Audit (RATA) testing is also proposed for extenuating circumstances.

Impacts to RECLAIM Facilities

Facilities that currently purchase RTCs but are not subject to a shave will be affected by the RECLAIM

amendments. The proposed shave will significantly reduce the supply of RTCs available for purchase. High-efficiency boilers/heaters, low-NO_x burners, add-on controls [e.g., selective catalytic reduction (SCR)], and in some cases, use of concentration limits in lieu of emission factors will help a facility to reduce reported NO_x emissions and to reduce purchases of NO_x RTCs. Note that modifications and replacements need SCAQMD approval before making a change. In addition, RECLAIM facilities that have previously installed low-NO_x burners but report at the default emission factor can apply for a permit amendment for a concentration limit to use a more accurate and lower value for their RECLAIM reporting.

RECLAIM facilities should review the changes proposed, determine how they will be impacted, and plan their RTC needs and compliance strategy.

More Information and Comments

For a copy of the SCAQMD's draft proposal, please refer to their webpage for "Proposed Rules" and click on "Regulation XX":

<http://www.aqmd.gov/home/regulations/rules/proposed-rules#RegulationXX>

Next Steps for RECLAIM: SCAQMD's Proposed Schedule as of August 19, 2015

- Public Consultation Meeting..... Sept. 2015
- Draft Socioeconomic Report..... Sept. 2015
- Stationary Source Committee Meeting Special Session for RECLAIM 9/22/2015
- Revised Proposed RECLAIM Rules and Staff Report TBD
- Public Hearing/Proposed Rule Adoption..... 11/2/2015

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 450 customers, including a wide variety of industrial facilities and government organizations throughout California.