South Coast Air Quality Management District

EXECUTIVE OFFICE MEMORANDUM

DATE: July 10, 2009

TO: Interested Parties

FROM: Barry R. Wallerstein, D.Env., Executive Officer

SUBJECT: Results of SCAQMD Investigation of an EPA Air Toxics Report Finds No Significant Toxic Risk from Santa Fe Springs Metal Facility

BACKGROUND

On June 24, 2009, the federal Environmental Protection Agency (EPA) released an update to its National-Scale Air Toxics Assessment (NATA), estimating risk from toxic air pollution across the United States for the year 2002. The update identified a neighborhood in Cerritos, California, as having the highest air toxic risk in the nation – with one chemical (hydrazine) from one metal processing facility accounting for over 95% of that risk. However, a subsequent evaluation by SCAQMD of the EPA analysis has identified a number of factors that produced gross overestimation by EPA of the air toxic risk in Cerritos due to this facility. A summary of SCAQMD's evaluation is provided below along with recommendations to help ensure that future studies provide more accurate estimation of risks in given communities.

SCAQMD FINDINGS

SCAQMD engineers and inspectors conducted a recent inspection of Heraeus Metal Processing in Santa Fe Springs, which was the facility identified in the NATA database as causing elevated cancer risk in Cerritos. SCAQMD staff also reviewed its permit records & emissions reports, and source testing was conducted to identify actual current emissions. The results are summarized below.

- *Inspection:* It was confirmed that the facility currently uses hydrazine as a reducing agent in an industrial process to recover precious metals. The subject process is a closed system that is vented to approved pollution control devices (i.e., scrubbers), operating under current permit.

- *Source Test:* SCAQMD air monitoring technicians took air samples from exhaust stacks at the facility and also downwind in Cerritos. The samples were analyzed for the presence & level of hydrazine. Four samples were taken and three of the samples

were below detection limits. Most of the hydrazine used is consumed in the process and the air pollution control equipment further limits possible emissions.

- *Emissions:* SCAQMD's analysis of source tests showed that the facility on the average emits less than 0.1 ounce of hydrazine per day (equivalent to two pounds per year of hydrazine). The EPA study used old unverified emissions data of 1,250 pounds per year.

- *Modeling:* The EPA report identified a Cerritos neighborhood (a single census tract) as having the highest cancer risk in the nation, estimated at 1,189-in-1-million, due to hydrazine from the Heraeus facility. SCAQMD's computer modeling based on the actual measured emissions rate shows a maximum lifetime cancer risk in the Cerritos neighborhood from the Heraeus facility of less than 0.50-in-1-million. This is 20 times lower than the 10-in-1-million threshold for public notification, and 50 times lower than the 25-in-1-million threshold for reducing toxic emissions, both required by SCAQMD rules. The maximum estimated risk from the Heraeus facility is below 3-in-1-million and occurs on the facility or the adjacent industrial area.

ADDITIONAL FINDINGS

SCAQMD has determined that the emission rate for hydrazine used in the EPA report was originally reported by the previous facility owner in 1989, and was not validated. Furthermore, the prior facility was incorrectly located in the EPA report, putting it in the middle of a residential community about 0.5 miles away in the middle of the Cerritos census tract. Both of these factors, the outdated and unverified emissions data and the incorrect location of the facility, led to the reported elevated risk in the Cerritos census tract due to the facility.

In addition to the reported highest risk census tract in Cerritos, SCAQMD examined the next five highest risk census tracts reported within SCAQMD jurisdiction as identified in the EPA report. Cancer risk in the 5th highest tract was also in Cerritos and driven by the same questionable data as described above. The 2nd, 3rd, 4th, and 6th highest risk tracts were found to be driven by three additional stationary sources. Two of these facilities have been out of business since 1991, and one has been out of business since 2000. The 2002 emissions used in the EPA report for these facilities should have been zero. **Therefore, the reported risks**

for all six of the highest risk census tracts identified by the EPA report in Southern California were based on outdated or erroneous information.

The SCAQMD also examined all census tracts within local air district jurisdiction for which the EPA report estimated risk to be greater than 100-in-one-million and where the risk was driven by a single stationary source. For some of these sources, such as landfills, the EPA used default emissions profiles which may not be accurate at the individual facility level. The locations of the landfills were also inaccurate, some being placed at a default location in the center of Los Angeles county. In addition to the landfills, there were several other risk-driving facilities in the EPA report that were incorrectly located or out of business in 2002.

Moreover, residents of Southern California should refer to SCAQMD's Multiple Air Toxics Exposure Study (MATES III). AQMD last year released the final report for its MATES III, a landmark study of toxic air pollution in the South Coast Air Basin. Unlike EPA's report, MATES III used the latest emissions data from facilities as well as tens of thousands of air samples collected during a 24-month period. The study found the average cancer risk across the region is about 1,200-in-1-million during a lifetime exposure, and that about 84 percent of the cancer risk is due to burning of diesel fuel in mobile sources (ships, trains and trucks), which was not included in EPA's NATA report. The highest cancer risk levels were found in areas of elevated diesel exhaust including near freeways, rail yards and the ports. Based on MATES III, the cancer risk in the Cerritos census tract mentioned above is between 1,200 and 1,500-in-1-million, primarily due to diesel exhaust. The SCAQMD is working with state and federal agencies to continue reducing the existing cancer risk from air pollution across Southern California.

RECOMMENDATIONS

- In discussion with EPA, SCAQMD is recommending better coordination with state and local air agencies, specifically to identify and double check data for those communities with the highest estimated risk prior to public availability of the data. Due to the way emissions information is reported, collected, and managed, there can be unavoidable lags between the time emissions occur and when the information is reported; nonetheless, active dialog and formal review protocols, implemented in partnership between federal, state, and local air regulators, can produce assessments of higher quality and greater public value.
- SCAQMD is also recommending that, prior to release of the next NATA assessment (for year 2005 data), that EPA clearly communicate the draft findings concerning highest risk neighborhoods with the respective state and local air agencies prior to final release of the findings, in order to allow reasonable time to perform quality checks in cooperation with local authorities.

- SCAQMD also recommends that EPA further enhance the assessment documents and media releases, by more fully describing with the appropriate caveats:
  a) the derivation of its toxic emission data;
  b) the fact that facilities may have taken action to reduce risks and therefore reported risks may have been substantially reduced since assessment;
  c) the purpose of the NATA assessment as a screening tool to provide information on potential toxic emissions sources and not as a report of actual risk at the census tract level; and
  d) directing interested parties to contact their local air agencies to determine if more recent data is available.

- SCAQMD also recommends that EPA include diesel exhaust in future assessments, since it is the risk agent in most communities.

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