



State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF AIR QUALITY

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DAQE-068-95

January 30, 1995

James R. Van Orman
Director of Environmental Management
Headquarters Ogden Air Logistics Center
Department of the Air Force
Hill Air Force Base, Utah 84056

Re: Support Document for Approval Order DAQE-067-95

Dear Mr. Van Orman:

This letter is a support document for Approval Order (AO) DAQE-067-95, dated January 30, 1995, and it establishes reporting requirements when Hill Air Force Base intends to change paint/solvent/thinner used in their painting operations. Hill Air Force Base is permitted to change the paint/solvent/thinner used in their painting operations without prior approval from the Division of Air Quality (DAQ), subject to the following conditions:

- A. If Hill Air Force Base intends to increase the rates of emissions of specific non-criteria pollutants and/or change the chemical composition of non-criteria pollutant emissions, compared to the emissions listed in the 1993 Base-wide HAPs emissions inventory times a scaling factor of 5.43¹, then Risk Index (defined in D. below) needs to be calculated for those compounds that would contribute to the increase in the rates of emissions and/or the chemical composition of the emissions. If the calculated Risk Index exceeds 21.22 (current high value as per the Notice of Intent (NOI) for this AO), a NOI shall be filed in accordance with Section 3.1, UACR.
- B. If the AO is determined to require changes, Hill Air Force Base shall submit as part of the NOI, the proposed rates and chemical composition of the new emissions, and screen modeling results to demonstrate that the proposed changes in the amounts and/or character of the emissions shall not cause an exceedance of TLV/100 (for non-

¹A scaling factor of 5.43 is the ratio of the total Base-wide allowable HAP emissions (201.2 tons per year considering all HAP emissions as VOC emissions) to the total Base-wide HAP emissions listed in the 1993 (the latest Base-wide HAPs emissions inventory available before this AO was issued), which was reported as 74.076 pounds per year (37.04 tons per year). $201.2 \text{ TPY} / 37.04 \text{ TPY} = 5.43$

4.2.4-413

carcinogens) and TLV/300 (for carcinogens). The present Maximum Risk Index of 21.22 shall then be revised (increased) to reflect the proposed change in the amounts and/or character of emissions.

- C. If Hill Air Force Base intends to change the rates and/or chemical composition of the non-criteria pollutant emissions currently approved according to the information submitted from the 1993 emissions inventory as a part of the NOI for this AO, and determines that a change in the AO is not required because the maximum Risk Index of 21.22 is not exceeded by the changes, then Screen modeling is not required to be performed and a formal NOI is not required to be filed. Hill Air Force Base is only required to submit to the Executive Secretary a list of changes in the chemical composition and emission rates, along with the annual HAPs emissions inventory submittal.
- D. Risk Index shall be calculated according to the formula given below:

$$\text{Risk Index} = \frac{\text{actual maximum pounds of toxics emitted per eight-hour period}}{\text{TLV/100 or TLV/300}}$$

where, TLV represents the Threshold Limit Value of the chemical compound. TLV/100 is used in the above equation when the chemical compound is not considered to be a carcinogen and TLV/300 is used when the chemical compound is a suspected or a confirmed carcinogen. TLV values and the carcinogenicity of chemical compounds can be found in a handbook published by the Association of Governmental and Industrial Hygienists (Technical Affairs Office, 6500 Glenway Ave., Bldg. D-7, Cincinnati, OH 45211-4438). Any other source of TLV values shall be accepted, subject to approval by the Executive Secretary. To calculate the actual maximum pounds of toxics emitted per eight-hour period (numerator in the Risk Index expression), the total scaled-up (to scale up, the proposed emissions are multiplied by a factor of 5.43) emissions in pounds per year of the chemical compound after the proposed increase is divided by 2,000 hours of operation per year (assumed at 40 hours per week and 50 weeks per year).

If you have any questions or concerns, please contact Arjun Ram at (801) 536-4066.

Sincerely,


Russell A. Roberts, Executive Secretary
Utah Air Quality Board

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cc: Davis County Health Department
EPA Region VIII, Mike Owens