

Rhode Island Department of Environmental Management  
Office of Air Resources

Proposal for Addressing Major Issues Raised During the Public Comment Period  
On Proposed Regulation No. 22 Amendments

Presented to the Air Toxics Stakeholders Group  
February 2003

The following plan has been developed for discussion purposes as a way of addressing many of the major concerns brought up in comments on Regulation No. 22 submitted during the public comment period.

1. Retain current list of substances, modified to correct any mistakes in classification (e.g. remove propylene glycol from the list because it is not a HAP and does not meet any of the other criteria for listing).

Rationale: The Federal HAP list does not include all toxic air pollutants relevant to the State. Having a more comprehensive list enables RI DEM to better evaluate the potential public health impact of emissions from existing sources. Moreover, Regulation No. 9 currently requires RI DEM to derive calculated Acceptable Ambient Levels (AALs) for pollutants not listed in Regulation No. 22 on a case-by-case basis as a part of preconstruction permit reviews for new and modified sources. Listing AALs for a comprehensive range of pollutants in Regulation No. 22 would limit the need for such calculations, inform the regulated community about the criteria that will be used to evaluate emissions of those substances, and ensure a consistent application of toxicity criteria from permit to permit.

2. Continue to define applicability thresholds (Minimum Quantities or MQs) in terms of use, but include a definition of "use" in the regulation that excludes the use of the listed substances in processes that emit none or de minimus quantities of those substances. The definition could identify specific criteria for exclusion, e.g. the use of metals in processes that do not produce dust, mist or vapor containing the metal or processes carried out in closed reactors that are not vented to the atmosphere. Alternatively, or in addition, the definition could refer to the Air Toxics Guidelines for specifics. The "use" definition would also be structured such that recycling, reclamation and subsequent use are not double counted and would exclude trace amounts of listed substances in mixtures. RI DEM is proposing to form a subgroup to develop this definition. Definitions of other terms (e.g. process, modify, construct, generate) will be taken from other Air Pollution Control Regulations, where possible.

Rationale: RI DEM considered changing the regulation such that MQs apply to emissions rather than use thresholds. However, doing so would require small companies to have to calculate their emissions, which would be more difficult for them than having to file a yearly registration based on use. A reasonable “use” derivation, in conjunction with the change in the MQs discussed below, should alleviate most of unintended consequences presented by the commenters.

3. Eliminate pound per hour and pound per day MQs but derive pound per year MQs in a manner that considers one-hour, 24-hour and annual average AALs. MQs would be derived from annual AALs as previously presented in the Air Toxics Guideline. Derivations of MQs based on one-hour AALs would assume that emissions occur for one hour each day and derivations of MQs based on 24-hour AALs would assume that emissions occur on one day each week throughout the year. The most stringent of the MQs derived from the available AALs for each chemical would then be used as the MQ for that substance. Registration requirements would also be altered to reflect this change (i.e. annual emissions inventories would require annual, but not hourly or daily, use and emissions information). The MQs are used only as applicability thresholds. More specific emissions information would be requested in Air Toxics Operating Permit (ATOP) applications and the actual pattern of emissions at a facility would be modeled to develop emissions limitations for the ATOPs. .

Rationale: Commenters pointed out that calculating maximum daily and hourly use would be difficult or impossible for some facilities. Further, commenters identified several scenarios where occasional use of relatively small amounts of a listed substance may cause a source to be subject to the regulation, based on hourly or daily MQs. While RI DEM is concerned about these difficulties, we don’t feel it’s appropriate to disregard the one-hour and 24-hour AALs when setting MQs, since shorter-term health effects are critical for some pollutants. The approach discussed above is an attempt to synthesize these concerns. Note that, as is the case with the current regulation, facilities will continue be required to provide hourly and/or daily emissions rates, as applicable, in ATOP applications so that appropriate modeling can be done to determine whether the facility is in compliance with shorter-term AALs.

4. Do not change the modeling assumptions used to derive the MQs.

Rationale: One commenter compared the MQ derivation process with EPA’s derivation of proposed de minimus quantities for its 112(g) program and found RI’s process to be overly conservative. When RI DEM compared the procedures, it was determined that: (1) RI DEM and EPA results were actually considerably more similar than implied by the comments, since the commenter compared a one-hour maximum impact to an annual average concentration and (2) the inputs used in the Rhode Island model were based on parameters from actual facilities in the State, while some of the assumptions used in the EPA modeling were inappropriate for

Rhode Island (e.g. EPA considered only impacts at or beyond 200 meters from the source, while many sources in Rhode Island have little or no buffering property).

5. Maintain the proposed methodology for calculating AALs, with minor changes. Health benchmarks were updated as appropriate and AAL derivations were reviewed to ensure that the methodology was applied consistently.

Rationale: RI DEM's response to comments will address specific comments about the AAL derivation procedures and about the health benchmarks and derivations for specific toxics. Commenters pointed out aspects of the procedures where they felt RI DEM was being overly conservative or which they believed were not based on scientific principles. RI DEM has reviewed these comments with the RI Department of Health (HEALTH) toxicologist who was involved in the preparation of the methodology. The HEALTH toxicologist believes strongly that (1) the State does not have the capacity to do case-by-case toxicological evaluations of chemicals and therefore is best advised to use benchmarks derived by other reputable agencies, (2) being consistently conservative is appropriate and is better than being inconsistent and (3) it is reasonable to have some decisions influenced by public concern as well as by scientific considerations (e.g. using an extra safety for carcinogens without cancer potency factors).

6. Continue to allow higher emissions of certain listed substances for facilities that meet the definition of Lowest Achievable Emissions Rate (LAER).

Rationale: This provision is not designed to require sources to be LAER, but rather to grant sources who have achieved that status some flexibility. RI DEM believes that this is a benefit, not a detriment, for industry.

7. Exempt standby generators that operate less than 500 hours per year from the regulation.

Rationale: The regulation as currently proposed exempts pollutants generated by the combustion of fuel oil, propane and natural gas, but states that the exemption does not apply to facilities combusting fuel to produce electricity. RI DEM intended those facilities to include power plants and similar facilities, but not standby generators.

8. Do not add exemptions for other specific source types, unless it can be demonstrated that emissions from those source types are insignificant or that regulation of those sources would be overly burdensome.

Rationale: The RI Air Toxics program is designed to assure that air toxics emissions from stationary sources do not pose an excessive risk to the public,

regardless of the type of source. Exempting certain source types could result in the inconsistent application of control requirements.

9. Eliminate the requirement in 22.4.2 that sources that initiate use or generation of a listed substance register with RI DEM prior to first use of that substance in cases that use, but not emissions, will be higher than the MQ for the substance. These sources would still be subject to 22.4.1, and so would be required to report those quantities as part of the annual emissions inventory by 15 April of the year following first use. Sources that will newly emit more than a MQ or a listed substance would still be required to apply for a preconstruction permit prior to emitting the substance.

Rationale: The initial registration requirement was included in the original regulation to allow RI DEM to evaluate new processes to verify that emissions from those processes are below permitting thresholds. In practice, facilities often do not provide this information until submitting the annual emissions inventory for the following year and sometimes do not know in advance how much of a substance they will use. Since the annual reporting requirement will continue to apply, RI DEM will still know about new use of listed substances in a relatively timely manner and will have the ability to evaluate the emissions from those processes at that time.

10. The language describing the ATOP requirements in 22.5 will be clarified and 22.5.9 will be modified to state that the RI DEM will supply facilities with the reasons for the cancellation or revocation of an ATOP in writing, rather than requiring the permit holder to request that information from RI DEM.

Rationale: These changes will make the ATOP process more straightforward and understandable to regulated sources.