Environmental Protection Agency

Noise Emission Standards for Transportation Equipment for Interstate Rail Carriers
ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 201

[FRL 1819-4]

Noise Emission Standards for Transportation Equipment Interstate Rail Carriers

AGENCY: U.S. Environmental Protection Agency.

ACTION: Notice of availability of new data and advance notice of intent.

SUMMARY: This notice announces the availability of additional data and information upon which the Agency will base its final rulemaking for a facility noise emission standard and additional noise source standards for interstate rail carriers.

DATE: The closing date of the comment period is 4:30 p.m. November 14, 1980.

ADDRESS: Written comments should be submitted to: Director, Standards and Regulations Division (ANR-400), Attention: CNAC Docket No. 80-40 Interstate Rail Carriers, U.S. Environmental Protection Agency, Washington, D.C. 20460. Persons wishing to review further information and the new data upon which the final rulemaking will be based may do so at the EPA's Public Information Center, Lobby West Tower Gallery Number 1, Waterside Mall, 401 M Street, S.W., Washington, D.C. 20460, between the hours of 9:00 a.m. and 4:30 p.m., until November 14, 1980.

Information and data located at the Center includes: noise measurement results, statistical analysis, rail yard sampling information, typical maps and overlays, population data, rail yard activity information and other relevant materials. Summary information on various aspects of the regulatory work are also available.

FOR FURTHER INFORMATION CONTACT: Mr. Robert C. Rose, Standards and Regulations Division (ANR-400), U.S. Environmental Protection Agency, Washington, D.C. 20460, Phone (202) 557-7068.

SUPPLEMENTARY INFORMATION: Pursuant to Section 17 of the Noise Control Act of 1972 (42 U.S.C. 4918), the Environmental Protection Agency published a Notice of Proposed Rulemaking (NPRM) in the Federal Register on Tuesday, April 17, 1979, 44 FR pages 23280-72, titled "Environmental Protection Agency [40 CFR Part 201] Noise Emission Standards for Transportation Equipment: Interstate Rail Carriers" and corrections to that notice on Monday, April 30, 1979; 44 FR 23362-03. The NPRM established proposed standards for overall railroad facility and equipment noise, as well as specific proposed standards for railroad, refrigerator cars and car coupling operations. The subsequent notice of correction pertained primarily to an alternative microphone location schematic which was inadvertently left out of the NPRM.

As a result of previously submitted extensive and diverse public comments to the proposed regulation dealing with: (1) the stringency of regulatory levels for the proposed facility emission standard and specific equipment and operational sources of noise; (2) the technologies available for abatement and their cost; (3) the use of the descriptor L90; (4) the complexity and cost of the proposed measurement methodology and measurement equipment; and (5) the development of a typical railroad modeling approach to noise configurations and its validity, the Agency has undertaken further investigations and activities in an effort to be responsive to these comments, taking into account the time reasonably available for such consideration.

Specifically, the Agency has undertaken the development of additional facility and source specific noise measurement information and data. EPA has increased the rail yard sample size in an effort to analyze rail yards on a "real yard" basis as opposed to a "typical" yard, and has instituted modeling modifications to analyze better the noise sources and levels generated. Further, the Agency has explored other optional technologies for abatement and control, particularly barrier technology, the use of other descriptors particularly L90, and the use of Type 1 and Type 2 sound level meters as an optional alternative to the integrating sound level meter.

EPA has made available to the public comments on these changes and the new data and information which is being made available by this notice.

1. Use of the noise measurement descriptor L90, max in lieu of L90 for measuring facility emission noise levels. Measurements the Agency has made in rail yards indicate a high correlation between L90, max and L90 when L90 is measured for a 24-hour period. The analysis indicates that L90, max is therefore a good estimate for L90 for the purpose of computing the health and welfare benefits. Correction factors are determined where the yard is not active for the full 24-hour period. See paragraph 4 below.

2. Noise measurement methodology provisions to allow the use of the Precision Type 1 or (SB1) and General Purpose Type 2 (G2A) sound level meter as an optional alternative to the integrating sound level meter.

In view of the difficulties expressed by public comments and comments on the application of the best available technology the Agency has revised the measurement procedures in the regulation allowing the Type 1 or Type 2 sound level meter, or integrating sound level meter, whichever is most convenient to the user.

3. Regulatory stringency levels of 60 and/or 65 db for a facility emission standard. The Agency has revised the stringency levels to reflect the degree of noise reduction achievable through the application of the best available technology, taking into account the cost of compliance.

4. Allowance for the daytime (7:00 a.m. to 10:00 p.m.) L90, max facility standard for rail yards which are not fully active. A review of rail yard noise measurement data indicates that in some cases where the duration of rail yard activity is low, a relaxation in the stringency of the facility emission standard is warranted during the daytime hours. The less stringent standard would apply only to the facility standard and would apply only during daytime hours. The allowances under consideration are as follows: 4 hours or less activity, 10/65: +12 hours activity, +5 db above 12 hours activity. Relaxation of facility standard.

5. Use of barrier technology as an effective rail yard noise abatement and control technique.

The Agency has explored extensively the use of noise barriers between a rail yard facility and the community as a technology to abate many of the highly random sounds. EPA has found that meaningful noise reduction can result from the application of this technology and at the same time permit flexibility to the rail yard in determining its operational techniques with the reduction of noise levels in order to meet individual sources or facility emission levels. Barriers used to abate noise from one source are likely to reduce noise from other rail yard sources as well.

6. Issuance of additional source specific emission standards for such sources as working and parked locomotives within rail yards, parked cars with mechanical refrigeration units.
The Agency has identified, within its previously issued list of major noise sources as indicated in the proposed regulation, those sources which most readily lend themselves to effective source treatments. They include all working and parked locomotives, parked cars with mechanical refrigeration, and the TOFC/COFC facilities. Alternative technologies are available for abatement of the sources including barriers, exhaust muffling and cooling fan treatment, engine shutdown, auxiliary electric power for refrigeration or heating of locomotive engines, relocation of parked locomotives and cars with mechanical refrigeration, as appropriate.

7. Use of the measurement descriptor $L_{\text{eq, max}}$ hour for measuring specific railyard noise sources from working or parked locomotives, cars with mechanical refrigeration, and trailer on flat car/container on flat car facilities.

The $L_{\text{eq, max}}$ measurement for these source standards are implicitly derived by methods which are consistent with the approach taken in the January 4, 1980 Final Source Standards rulemaking issued by the Agency. See 45 FR 752-77.

8. Applicability of the facility emission standard to commercial residential land uses only.

The Agency is considering applying the final facility emission and additional source standards to only residential and commercial land uses. Other land uses surrounding railyards may receive protection as a result of noise abatement technology applied to reduce exposure levels on the commercial and residential land use areas.


The Agency is concerned over situations in which railyards would be allowed to become noisier and still be in compliance with the final facility emission standard. Currently, there are many yards with noise levels considerably less than those the Agency has under regulatory consideration. Many public comments advocated the insertion of a non-degradation requirement in the rule.

Dated: September 24, 1980.

David G. Hawkins,
Assistant Administrator for Air, Noise and Radiation.