

United States
Environmental Protection
Agency

Office of
Noise Abatement Control
Washington DC 20460

N-96-01
EPA 550/9-80-215
June 1980

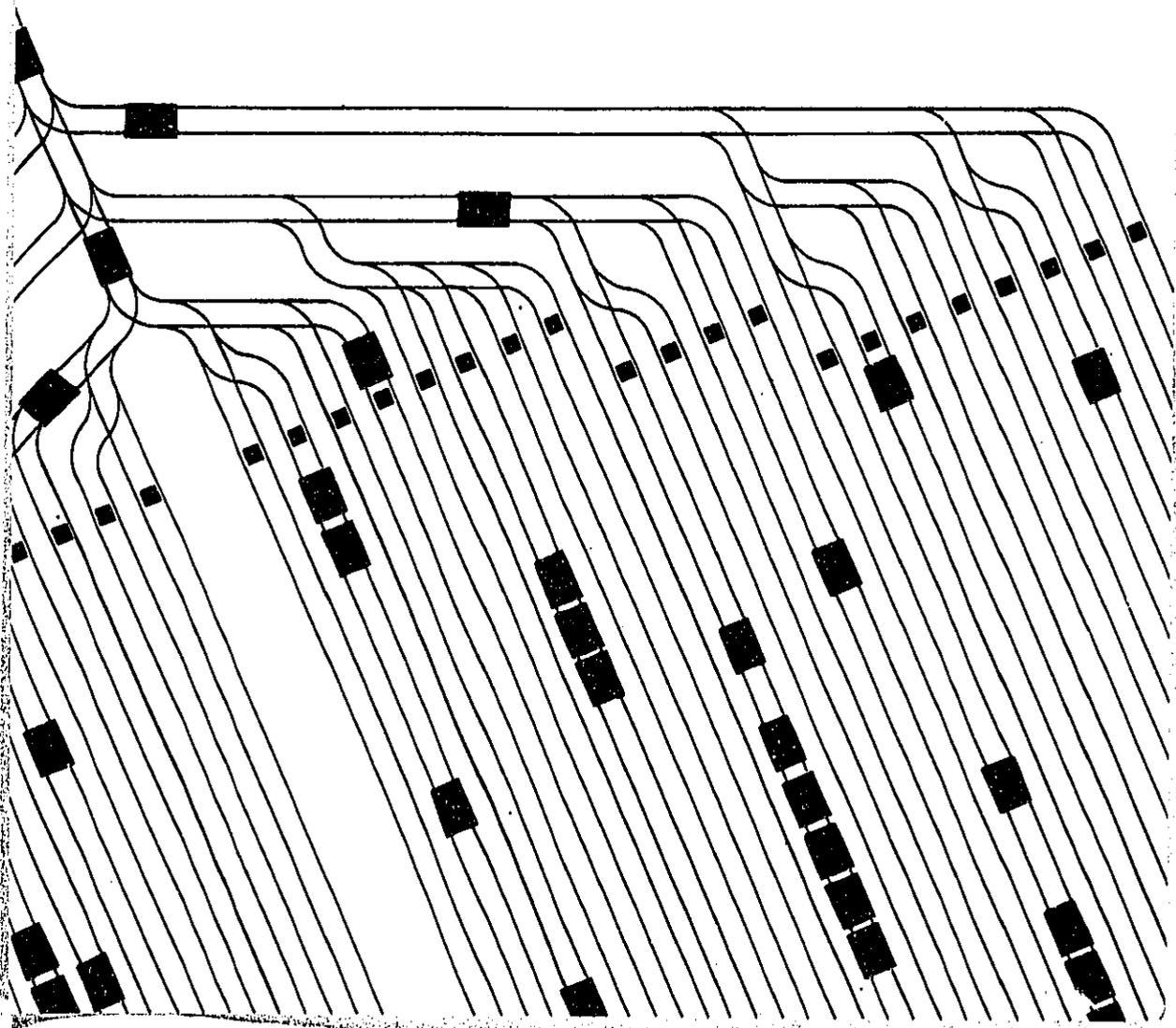
II-A-110

Noise



Official Docket for Proposed Revision to Rail Carrier Noise Emission Regulation

Part III



N-96-01
II-A-110

OFFICIAL DOCKET FOR PROPOSED REVISION
TO RAIL CARRIER NOISE EMISSION
REGULATION

(PART III)

JULY 1980

FOREWORD

Proposed revision to the rail carrier noise emission regulation, encompassing a railyard property line standard and source standards, was published on April 17, 1979 (44 FR 22960). The official public comment period began with this Federal Register publication and closed July 2, 1979. All comments received or postmarked by the closing date were published in a two part Official Docket for Proposed Revision to Rail Carrier Noise Emission Regulation (EPA 550/9-79-208).

On January 4, 1980, we published final railyard noise source standards and also reopened the formal comment period for the proposed property-line noise regulation (45 FR 1252). Public comments were accepted until April 4, 1980, to allow all interested parties the opportunity to express their opinions on the proposed property line standard in light of the finalized source standards.

This publication consists of the public comments that we received during the reopened comment period and an appendix that includes those comments that were received between July 2, 1979 and January 4, 1980, the period of time after the closing date of the first comment period and before the reopening. It is designated as part III of the official docket for the April 17, 1979, proposed revision to the rail carrier noise regulation.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 6 1980

SUBJECT: Association of American Railroads (AAR)
Environmental Advisory Group Meeting

FROM: Robert C. Rose, Program Manager, Railroads

TO: Rail Carrier Docket OHAC 80-01

Robert C. Rose

Mr. Charles Elkins, Deputy Assistant Administrator, Office of Noise Abatement and Control, spoke to the subject Advisory Group from 1:30 to 2:30 p.m., on January 30, 1980. Mr. Elkins' presentation concerned the recently published Source Standard Regulation for railyards as well as, a general discussion as to the future development of a final railyard property-line standard, and related issues and policies associated with the railroad noise program. Upon completion of Mr. Elkins' presentation, a number of questions and responses were made both from the audience and by Mr. Elkins. Listed below are the questions, the response given and comments.

1. Question from industry spokesman: - What kind of industry data was used in the development of the source regulations?

Answer by Mr. Elkins: AAR provided some information relative to noise levels as well as certain state agencies. CONRAIL provided valuable information relative to car coupling impact noises.

2. Question from industry spokesman: - What are the penalties under the Noise Control Act for violation of the railroad regulations?

Answer by Mr. Elkins: Civil penalties are at \$10,000 per day, criminal penalties are at \$25,000 per day.

3. Question by industry spokesman: - Should CONRAIL resubmit their materials to the new docket?

Answer by Mr. Elkins: If you wish to highlight any particular information on your previous submittal, please feel free to do so; however, the Agency will be reviewing all material relative to the property line previously submitted under the earlier docket.

0 FEB 05 09 16

4. Question by industry spokesman:- Why is the Congress changing the effective date for regulations from three years to four years?

Answer by Mr. Elkins:

The primary concern of Congress was to have additional time to evaluate the impact of final EPA rail carrier noise regulations. They have allowed six months for the Federal Railroad Administration to make a study on any new final EPA noise regulations and six months for Congress to review the study.

5. Question by industry spokesman:- Is there an existing Memorandum of Understanding between EPA and FRA relative to enforcement?

Answer by Mr. Elkins:-

No. Although a Memorandum of Understanding would be beneficial in this regard, and FRA has argued that EPA has central regulatory enforcement authority, we do not foresee any difficulties with FRA proceeding with their obligations under the law. We see our efforts as one of providing technical assistance to them as they develop their compliance regulations.

6. Question by industry spokesman:- Why does EPA feel that preemption is such a central issue? As I read the law, it's not necessarily so.

Answer by Mr. Elkins:-

EPA reads the law as requiring total preemption of state and local regulations and ordinances under Section 17 of the Act. However, until 1984 in this case, or whenever EPA final rail carrier regulations are effective, the states and localities can regulate those railyard noise sources not covered by effective Federal rules.

7. Comment by industry spokesman:-

Mr. Peter Conlon of the AAR took exception to the notion suggested in the presentation that AAR did not provide extensive materials to the docket relative to the proposed source standards and property-line standard. Quite the contrary, Mr. Conlon cited, the AAR spent many dollars and many manhours in developing an extensive submission to the docket.

Answer by Mr. Elkins:-

The EPA thinks that the AAR material submitted should not be construed by the industry as the only submission acceptable to the Agency. Quite the contrary, EPA encourages individual railroad companies to submit their comments, particularly information and data in order to assist us.

8. Question by industry spokesman:-

What are the health and welfare effects on people in regards to these regulations?

Answer by Mr. Elkins:-

The Agency was not, under the law, permitted to use health and welfare impact as a decision making criterion. Although the Agency does review the general impact to health and welfare in conjunction with its environmental mandate.

9. Comment from industry spokesman:-

Looking at State and local rules and ordinances, Chicago, for an example, has a 55 decibel level. Their standard for rail carriers and railyards does not have any reality. It's really a reflection of previous EPA recommended noise levels. Realistic standards must be based on a combination of community needs, industry concerns, and technology cost.

Response to comment by Mr. Elkins:- What is so special about the railroad industry? Why should State and local rules and ordinances be preempted? It seems to us that the railroad industry does not want to be treated the same way as other industries. After all, EPA regulates many other industries in the noise area and in those , State and local rules and ordinances are not preempted. It appears to EPA that the railroad industry is attempting to go the opposite way from the present trend in State and local regulation.

10. Comment by industry spokesman:- It is my observation that industries have a tendency to move away where environmental laws become more stringent and move to those areas where these types of laws are less stringent.

11. Comment from industry spokesman:- Sounds like the EPA is setting standards on railroads because after all, EPA develops regulations on other types of transportation equipment. Consequently, we will have a tendency to suffer as a result of your needs to satisfy environmental considerations and budget justifications.

12. Comment by Mr. Elkins:- I feel that 55 decibel level is not in the cards for the final railyard property-line standard. However, you must realize that you cannot have your cake and eat it, too. The final regulation is not going to be a give-away nor is it going to be cheap relative to cost in order for the industry to implement. The industry brought on the need for EPA to issue these kinds of regulations; it must accordingly accept the consequences.

13. Comment from industry spokesman:- Should it be in our interest to change the current law?

Answer by Mr. Elkins:-

Yes, but I'm not here to convince you today, but it would seem to me that EPA has gone far enough in its rail carrier rulemaking already.

The meeting was adjourned relative to Mr. Elkins' presentation.

AGENDA

ENVIRONMENTAL ADVISORY GROUP MEETING
JANUARY 30-31, 1980
INTERNATIONAL CLUB - 1800 K STREET, N.W.
THEME: RAILROADS, THE ENVIRONMENT, AND THE 1980's

*Attachment -
ONAL 80-01*

WEDNESDAY, JANUARY 30

- 8:30 - 9:00 Registration
- 9:00 - 9:15 Introduction - William J. Harris, VP, Research & Test, AAR
- 9:15 - 10:15 Department of Transportation - Robert E. Gallamore, Deputy Administrator, Federal Railroad Administration
- 10:15 - 10:30 Coffee Break
- 10:30 - 12:00 Environmental Protection Agency - Stephen Plehn, Deputy Assistant Administrator For Solid Waste; Henry Van Cleave, Manager of Spill Prevention and Control Programs
- 12:00 - 1:15 Lunch
- 1:15 - 2:30 Environmental Protection Agency - Charles Elkins, Deputy Assistant Administrator, Noise Control Programs (Railroad Noise Standards)
- 2:30 - 2:45 Coffee Break
- 2:45 - 4:00 U.S. Chamber of Commerce - Linda Anzalona-Woolley (Legislative and Regulatory Trends)
- 4:00 - 5:00 National Commission on Air Quality - Karen Neale (Revising the Clean Air Act)
-
- 8:30 - 10:00 Environmental Legislation Panel - Christine Rochford, AVP Government Affairs, IC Industries; Kimball Clark, AAR Legislative Department; Tom Ryan, Counsel, House Interstate & Foreign Commerce Committee
- 10:00 - 10:15 Coffee Break
- 10:15 - 12:00 Complying With Environmental Regulations Panel - James B. Gregory, AVP Operations, ConRail
- 12:00 - 1:15 Lunch
- 1:15 - 2:30 Resource Conservation & Recovery Act Panel - A. Gayle Jordan, General Attorney, SOU; George Hanks, Asst. Director of Federal Government Relations, Union Carbide Corp.; George Kush, Director, Chemical Waste Programs, National Solid Waste Management Assoc.
- 2:30 - 2:45 Coffee Break
- 2:45 - 5:00 Environmental Studies Division Activities - NPDES - Walt Studabaker; Pesticides - Peter Conlon; Noise - Peter Conlon; Air - Peter Conlon; Spills - Walt Studabaker; Wrap up - Conan Furber

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Comments Concerning Proposed Changes to 40 Code
of Federal Regulations,
Sections 201.17 and 201.30 through 201.33

Section 201.17

The establishment of a receiving property noise standard of $L_{dn(24)}$ of 70 dBA for both existing rail and future new construction facilities and equipment appears to be excessively high. This liberal standard restricts the use of Housing and Urban Development (HUD) funds in large areas adjacent to rail yard facilities because HUD will not grant funds or insure loans for residential property wherein the $L_{dn(24)}$ sound level is 65 dBA or higher. Because it is possible to design and build new construction rail yard facilities and equipment with significantly lower overall noise levels, the railroad industry should be willing to accept a more restrictive standard for new yard facilities. In areas where new rail yard facilities will be established adjacent to residential development, the property line standard should approach or equal the HUD standard for residential property.

Tables (1) and (2) are very useful for field monitoring personnel and can be used without additional technical information by persons unskilled in acoustical engineering. It would be useful for the Environmental Protection Agency to publish a more detailed explanation of tables for use by engineering and management personnel without acoustical engineering training. This would assist management and field monitoring personnel in their discussions with railroad engineering and management personnel in interpreting the results of field tests. It is recommended that Tables (1) and (2) be retained in the final version of Section 201.17.

Sections 201.31-201.33

The requirement that an integrating Type I sound level meter be used to measure sound levels increases the cost for surveillance monitoring for local governments. Some local governments have purchased integrating sound level meters in the past to specifications which do not precisely match the specifications contained in these Sections. It is recommended that some provision be included for the Environmental Protection Agency to certify equipment meeting other specifications for use in making field measurements.

If a separate integrating sound level meter certification procedure is not included in these Sections, costs for instrumentation may cause local government to fail to provide services to local residents to determine whether the railroad yard operators are complying with receiving property standards.

Some communities have been able to purchase non-integrating Type I sound level meters, but there is no provision for the use of this precision sound level meter in this proposed rule making. Many local governments could measure rail yard sound levels using Type I sound level meter reading sound exposure levels at ten-second intervals and use a calculator to determine one hour Leq as a spot check on rail yard performance.

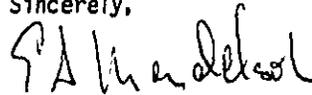
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Robert Rose
February 14, 1980
Page 2

Enclosed are the specific comments concerning the proposed rule making for 40 Code of Federal Regulations, Sections 201.17 and 201.30 through 201.33.

I hope that I have been able to make a significant contribution towards the improvement in receiving property standards for rail yard facilities and equipment.

Sincerely,



Eric S. Mendelsohn, Chief
Air Pollution and Noise
Control Section

ESM:REL:drc

Enclosure: Montgomery County, Maryland, Department of Environmental Protection, Comments Concerning Proposed Changes to 40 Code of Federal Regulations, Sections 201.17 and 201.30 through 201.33.

cc: DPC File No. AD-11-3-2



City of LANSING

LANSING, MICHIGAN

GERALD W. GRAVES, MAYOR

February 15, 1980

Mr. Henry E. Thomas
Standards and Regulations Division (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

RE: Rail Carrier Docket ONAC 80-01

Dear Mr. Thomas:

This letter is in response to your communication of January 25, 1980, received in this office February 4, 1980 and the Federal regulations of January 4, 1980 regarding railroad noise. Despite the opportunity for establishment of a local ordinance on this subject which has been provided by the Environmental Protection Agency, this is not a policy matter which I would in any way promote to the Lansing City Council. The City of Lansing does not have the manpower, equipment or financial resources to adopt a railroad noise ordinance and enforce same. The City is already relying upon its fund balance from previous years to balance present budgets and the forecast is for more of the same. Additionally, in all probability it will be necessary to raise taxes and cut programs just to make ends meet next year. There is no capacity given present resources for the City to initiate a program of railroad noise enforcement, even by 1984 when the various regulations are scheduled to take effect.

This is not to say that the City of Lansing does not have problems with the railroads in this jurisdiction. Lansing is a significant manufacturing center and has a full complement of railroads - many of which are adjacent to residential or commercial uses. However, the City has other priorities in its relations with the railroads. In general, but not necessarily in order, those priorities include: 1.) grade separation of railroad/automobile intersections; 2.) improved crossings for at-grade intersections; 3.) improved safety equipment for at-grade intersections; 4.) maintenance and redevelopment of railroad-owned properties no longer used for railroad purposes; 5.) relationships of railroad service and expansion of the City's economic base.

Mr. Henry E. Thomas
February 15, 1980
Page 2

While railroad noise is a concern of our citizens, it is perhaps only on a par with noise pollution from trucks and general traffic and existing industries. In many instances, railroad noise is a significant factor because of its intermittent nature on top of a steady level of industrial noise. By and large, those sources are adjacent because the railroads service the industries. Lansing, like many older communities, saw its residential stock develop around the factories which provided jobs to our residents. As a result, many of our homes were built close to industries or railroads. The sources of noise pollution were established first, and were necessary to the growth and development of our City.

It has been virtually impossible for the City of Lansing to effectively regulate railroads where other City ordinances have been developed, such as elimination of trash or weed complaints on railroad properties or enforcement penalties for excessive idling which blocks automobile traffic. It is not apparent how the City could expect to have better success in enforcing railroad noise violations.

If consideration is given by Congress of Federal appropriations to assist local enforcement of railroad noise regulations, I would suggest that consideration first be given to those problems I have listed above and that noise regulations be limited to manufacturers' standards. I would warn that over-zealous regulations by an agency with a history of over-zealousness would only further injure what is unfortunately already a sick industry.

Sincerely,


Gerald W. Graves
Mayor

GWG/1b

cc: Congressman M. Robert Carr
Grand Trunk Western Railroad
Conrail



GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
WASHINGTON, D. C. 20004

FEB 28 1980

Mr. Henry E. Thomas
Rail Carrier Docket ONAC 80-01
Standards and Regulations Division (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Thomas:

Thank you very much for the opportunity to comment on the property-line standard for railroad noise. We are glad to see that EPA has promulgated source standards for some noise sources in railyards and look forward to the general property-line standards.

Like other communities around the country we have in our noise regulations a section that exempts "vehicles propelled only upon rails and tracks". However, this exemption does not extend to the aboveground "subway" cars of the Washington Metropolitan Area Transit Authority. For these vehicles a noise standard has been set which has proved very successful and we encourage EPA to set a similar standard instead of using the Ldn. Our standard is:

Railroad cars operated by the Washington Metropolitan Area Transit Authority shall be operated in such a manner so as not to emit maximum noise levels in excess of those established in Table II of this act when measured at a distance of one hundred (100) feet from the track centerline. The slow meter response of the sound level meter shall be used and the measurement shall be taken approximately five (5) feet above grade.

Table II

<u>Zone</u>	<u>Maximum Noise Level</u>
A. Residential, Special purpose or waterfront zone	75dB(A)
B. Commercial or Light-manufacturing zone	80dB(A)
C. Industrial zone	90dB(A)

We would be glad to discuss this with you and share with you some of our measurements taken in Washington, D.C. (this ability to communicate directly is one advantage of being close to EPA Headquarters). My telephone number is 727-5748.


William B. Johnson
Acting Director



HARRY HUGHES
GOVERNOR

STATE OF MARYLAND
EXECUTIVE DEPARTMENT
ANNAPOLIS MARYLAND 21404

March 3, 1980

Mr. Charles L. Elkins
Deputy Assistant Administrator
for Noise Control Programs
U.S. Environmental Protection Agency
Washington, D. C. 20460

Dear Mr. Elkins:

This is in response to your letter of January 25, 1980 in which you outline the final EPA specific source noise standards for interstate rail carriers.

Anticipating Federal preemption of State and local authority, Maryland noise regulations were developed so as to exempt railroads. The published standards allow noise levels up to 92 dBA at receiving residential and commercial properties. These levels are considerably higher than those currently being enforced in Maryland. They fail to address the duration of exposure at these levels and as a result are too lenient. This matter should be given consideration in establishing future property line standards.

I hope that these remarks will be of value in future considerations.

Sincerely,


Governor

NEW YORK STATE
DEPARTMENT OF TRANSPORTATION
William C. Hennessy, Commissioner

1220 Washington Avenue, State Campus, Albany, New York 12232



MAR 1 01980

Rail Carrier Docket Number ONAC 80-01
Standards and Regulations Division (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

Gentlemen:

This is in response to your request for additional comments on the proposed property line noise standard published in the Federal Register on January 4, 1980. The enclosed comments are a resubmission of our recommendations concerning the April 17, 1979 proposal. In almost all cases our previous comments applied to the property line standard and are thus still applicable.

Please carefully consider these recommendations in your final rule-making. Should you require any additional information or clarification of the material transmitted herewith, you may contact Mr. W. McColl of our Environmental Analysis Bureau at (518) 457-5672.

Sincerely,

A handwritten signature in cursive script, appearing to read "W. C. Hennessy".

W. C. HENNESSY
Commissioner

Enclosure

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
COMMENTS ON U.S. ENVIRONMENTAL
PROTECTION AGENCY NOISE EMISSION
STANDARDS FOR TRANSPORTATION
EQUIPMENT; INTERSTATE RAIL CARRIERS
FEDERAL REGISTER APRIL 17, 1979

June 28, 1979

As a general comment, we do not agree that a single Federal solution is not possible to solve the many local and site-specific rail noise problems that exist nor do we believe that the standards have been developed in terms of typical and average situations. In the first instance, we realize the great range of existing noise levels in communities near railroad facilities. In New York State levels may vary from an Leq of 30 dBA in rural upstate areas to 80 dBA in New York City. We therefore appreciate the difficulty in attempting to set a single absolute standard level and effectively protect different areas with their great environmental diversity. Thus, we feel the standards have been developed in terms of at least common denominator approach rather than for typical or average situations.

It is our recommendation that a relative standard could have been developed that would satisfy the need for national uniformity of treatment. Rather than a mere single level for all receptors, a single level increase limit could be provided, e.g. existing level plus 5, 10, or 15 dB. In this manner existing quiet areas can be protected while recognizing the additional problems associated with extremely noisy areas. A relative standard need not be any more difficult to measure or enforce as well in that the existing levels can be satisfactorily calculated using the population density relationship mentioned in Section 201.33 (d)(1)(i). In the absence of any explanation to the contrary, we see no reason why this approach would not prove to be more satisfactory to all parties concerned (federal, state, local, railroads, etc.).

A second general comment involves the lack of recognition or requirement concerning local responsibilities for land use and zoning control. Some consideration should be given to adjoining land that becomes developed after the implementation dates of this directive. The railroads should not be responsible for noise impact to receivers who come into existence at some future point in time. Local government has the clear right and responsibility to provide the necessary preventive protection in these cases.

Although we fully understand the mathematics involved in converting from the day-night sound level to its equivalent hourly or cumulative hourly levels, we feel that some very excessive impacts could result that would not be considered violations of the proposed receiving property standards. Hourly Leq levels of 84 dBA are very high for any level of population density development. As a practical matter, the enforcement procedure for this or any other similar regulation will involve as many short-term screening measurements as possible at as many sites as possible rather than a few 24 hour measurements. Thus, the one hour Leq will be the prime metric in the implementation of the standard and not the Ldn. It is our opinion that the levels should have been developed based on a single worst hour condition with appropriate levels stipulated.

This being the case, the day-long condition would take care of itself. Perhaps a night time level could also be stipulated (10 dB lower) to deal with the occurrence of specific night time operations.

Specific Comments:

Section 201.1 (n) - No indication is given for the purpose of the "Adjusted Measured Sound Level" or the reason one decibel is subtracted from the measurement. Perhaps it is a tolerance.

Section 201.1 (kk) - The definition of "Receiving Property" should consider our second general comment mentioned above.

Section 201.1 (gg) - We see no reason to specify Type 1 measurement equipment nor the FAST dynamic response for all cases. Type 2 instrumentation is sufficient in all situations while the SLOW response is best for all conditions save for the car coupling and retarder tests.

Section 201.25 (b) - We do not understand the reason for this provision. When the line-of-sight is broken and diffraction occurs, a similar result is usually obtained when the break is either a certain distance from the source or that same distance from the receiver.

Section 201.26 (a) - Some measurement provision and, perhaps, a standard decibel level should be given for large groups of refrigerator cars parked in one area. Although the control of the specific car correctly rests with the owner, the yard operator has other abatement measures at his disposal (such as barriers) to control the operation and cumulative effects from this source.

Section 201.26 (b) - The waiver of this standard and procedure where it is demonstrated that the cars are not travelling at a speed greater than 4 mph renders the entire section useless. The requirement to obtain ten measured maximum impact levels together with their ten measured speed levels is virtually impossible.

Section 201.31 (a) - The measurement instrumentation criteria given is much too restrictive and excessively precise. Precision instrumentation satisfying these requirements is frequently expensive, hard to operate, and hard to maintain.

Section 201.33 (d)(1)(iii) - The highway traffic component of the noise level should not be estimated by using the procedures contained in FHWA-RD-77-18. Instead, Report No. FHWA-RD-77-108 must be used. This is not a typographical error! Report 77-18 is the TSC method which is now outdated. Report 77-108 is the FHWA method which will be mandatory in federal highway work after January 1, 1980.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION
415 12TH STREET, N. W.
ROOM 508
WASHINGTON, D. C. 20004

DIRECTOR OF TRANSPORTATION



MAR 10 1980

Mr. Henry E. Thomas
Rail Carrier Docket ONAC 80-01
Standards and Regulations Division (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

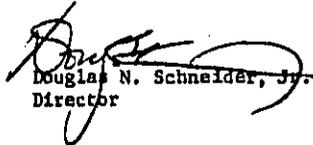
Dear Mr. Thomas:

I appreciate the opportunity to comment on the proposed revised and expanded railroad noise regulations.

The only applicable railroad noise source affected by the regulations in the District of Columbia is the locomotive load cell test stand. Our test stand is located in the center of our railyard and sound is buffered from impacting residents and private property. There is no recorded violation of standards in adjacent areas to the railyard.

Therefore, we believe that the proposed regulations do not have significant impact upon District of Columbia rail operations. Mr. William B. Johnson's letter to you (February 28, 1980, copy attached) explains in additional detail the noise standards which have been set for rail transit cars operated by the Washington Metropolitan Area Transit Authority.

Sincerely,


Douglas N. Schnelder, Jr.
Director

Enclosure

RECEIVED
13 MAR 20 9:41



ARIZONA DEPARTMENT OF TRANSPORTATION

206 South Seventeenth Avenue Phoenix, Arizona 85007

BRUCE HABBITT
Governor

March 17, 1980

WILLIAM A. ORDWAY
Director

Rail Carrier Docket ONAC 80-01
Attn: Henry E. Thomas, Director
Standards and Regulations Division (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Thomas:

We appreciate the opportunity to review the final EPA railroad specific source noise standards and the additional information contained in your letter of late January. We've now concluded this review.

We confess to being disappointed that standards are not more stringent, although we understand there are railroad cost considerations. But the bottom line, we feel, is that the EPA noise standards will do little to alleviate rail yard noise problems . . . and we support measures that can bring a meaningful reduction in noise impacts.

Our concern about the limited effectiveness of the proposed regulations is intensified by the legislative pre-emption in Section 17 of the Noise Control Act, which prohibits state and local governments from adopting or enforcing standards for equipment or facilities covered in Federal regulations unless they are identical to the Federal standards.

Though state and local governments may regulate railroad sources not covered by EPA regulations, the number of such sources eventually will be quite limited. We, therefore, believe that Section 17 should be amended to permit state and local governments to address local railroad noise problems in a manner consistent with, rather than identical to, Federal regulations.

A further problem is that since EPA standards must be uniform throughout the nation, they are based on "average" yard conditions. Thus, they may not be appropriate for specific cities in Arizona.

The FRA is charged under the Act with issuing rules to assure compliance with the EPA standards. However, FRA has indicated

(con't)

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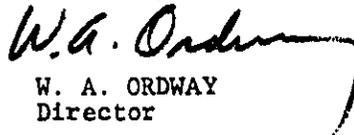


March 17, 1980

that it has limited enforcement manpower. Consequently, full compliance with the railroad noise regulations in specific state and local jurisdictions may depend on these governments adopting and actively enforcing standards identical to the EPA standards.

Again, thanks for this chance to give our comments.

Cordially,



W. A. ORDWAY
Director

WAO:hbb

cc: C.W. Rider

Q-IV, Incorporated
300 United Bank Building
Chattanooga, Tennessee 37402

March 10, 1980

Rail Carrier Docket ONAC 80-01
Standards and Regulations Division
U. S. Environmental Protection Agency
Washington, D. C. 20460

Gentlemen:

In my study of the "Noise Emission Standards for Transportation Equipment; Interstate Rail Carriers" published January 4, 1980 in the Federal Register, I find the regulation does not suggest nor does it make any mention of the possibility of eliminating or controlling retarder screech at the source. This indicates there is no sufficiently advanced state of the art available to meet your published receiving neighborhood requirement.

I call to your attention the fact that we have been extremely successful with our LOW-NOISE shoe which we have been marketing for the past four years.

It is our opinion that the best and surest solution for any problem such as this is to eliminate the cause rather than to try to treat the effect. This is what can be done easily, feasibly, economically and without creating worker hazards when Q-IV LOW-NOISE retarder shoes are installed as direct replacements on equipment presently in place.

Your regulation proposes only barriers as a logical solution for the problem. Barriers in freight classification yards must be considered worker hazards when they are located adjacent to retarder activities and their placement will certainly necessitate substantial investment for the railroads as well as added maintenance costs because barriers often will have to be set aside. Once in place the barriers still will not have lessened the noise problem for railroad employees who must work in the areas of the retarders.

I submit that several railroads have been extremely pleased with the results obtained when our LOW-NOISE shoes have been installed. Among them, the RF&P, the Southern, ICG, Burlington and Santa Fe. We also have been working with other roads and expect to soon have their situations resolved, too.

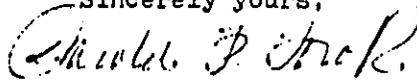
(2)

We're certain you're aware that low noise shoes are available for retarders because your preliminary document contained reference to them as a possible solution to the problem. Thus, I cannot understand why the total omission in this promulgation.

Your immediate reconsideration and correction will be most appreciated so that your regulation properly reflects that there is another solution available for retarder noise control than the erection of barriers.

We make this request as a Small Business Firm trying to make its way in a field of giants.

Sincerely yours,



Harold F. Torok,
President

Phone: (615) 892-7291

cc: Mr. Peter Conlan
Association of American Railroads
1920 L Street, N. W.
Washington, D. C. 20036

Mr. Steve Urman
Mail Code RRS-24
Federal Railroad Administration
400 7th Street, S. W.
Washington, D. C. 20590

A letter was written to Mr. E. M. Martin
at Glendive, Mont. on 11-21-79, but received
no response. Mr. Walters, Trainmaster at Mandan,
was contacted four times and promised to follow
through, but so far switching operations are
the same as stated on petitions.

Copy sent to Mrs. Phil Davison, Jr.
North Dakota Railway Lines
418 E. Ross Ave.
Bismarck, N. Dak 58501

PETITION

We, the undersigned residents of Mandan, North Dakota, are hereby protesting the excessive and unnecessary noise levels created by the Burlington Northern Railroad during the course of their switching operations and general movement of trains in the area known as the west end of Mandan.

In many cases the cars roll down the track unattended, banging into one another with such force that reverberations are felt in the homes in the area up to a distance of three and four blocks away. Many times the shock sounds like the shattering of glass, wall hangings rattle and vibrate and cracks are beginning to appear on interior walls of homes that are twenty to thirty years old and had no visible cracks until just the past few years. In some instances the vibrations are felt while a person is sitting in an easy chair in the family living room. The excess noise appears to be more prevalent during the late afternoon, evening and late night hours.

In many instances the diesel engines are on fast idle which creates a continuous loud rumble - - - this is most annoying as it interferes with normal conversation within the home, interrupts the audio portion of television, as well as disturbing while sleeping.

Those of us residing on the south side of the railroad tracks are unable to open our windows in the summer months due to excessive diesel exhaust fumes.

	<u>NAME</u>	<u>ADDRESS</u>
1.	Jean Dodner	204 1/2 W. Main, Mandan
2.	Dale Hill	104 12th ave N.W. Mandan
3.	Jeanette Kueper	1204 W Main Mandan
4.	Robert T. Cheng	1206 1st St N.W. Mandan
5.	Peggy Montice	1204 - 1st st. NW Mandan
6.	Anna Fristad	1200 - 1st St N.W. Mandan
7.	Glen Bergquist	201 - 10th Ave NW Mandan
8.	Margaret Hartner	201 - 9th Ave. N.W.
9.	Paul Hartner	201 - 9th Ave N.W.
10.	Bernadette Huss	201 - 8th Ave. N.W.
11.	Lillian Olson	203 - 9th Ave. N.W.
12.	John Sauer	713 11th Ave. N.W.
13.		
14.	John Finck 906 W. Main	Josephine Voth 902 West
15.	Randy Sen	203 11th Ave. N.W.

16.	Mrs Nettie Schaus	1106 W. Main
17.	Mrs Regina Tompf	1106 1/2 W. Main, Mandan
18.	Mrs Emma Cavarelli	1108 West Main, Mandan, ND
19.	Mrs Gary Volk	105 NW 11 Ave
20.	Miss E. Schmitt	106 NW 12 Ave Mandan ND
21.	J. Heister	1008 W Main Mandan ND
	Mrs. Dennis Hilfer	108 - 1100 Ave. NW - Mandan
	Dennis Hilfer	108 1100 Ave NW Mandan

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	NAME	ADDRESS
2-19-80 ¹ .	Lucille Emineth	201-11 th ave S.W. Mandan
2-19-80 ² .	Mary Berda	302 12 th ave SW Mandan
2-24-80 ³ .	Douglas O. Bunde	La Rancho Tr. Ct. Mandan
2-24-80 ⁴ .	Edward Emineth	202 6 th Ave SW Mandan
2-24-80 ⁵ .	Pauline Emineth	202 6 th ave SW Mandan
2-24-80 ⁶ .	Donald Emineth	201, 11 th ave SW Mandan
2-24-80 ⁷ .	Donald Bunde	302 12 th AVE SW. MANDAN
3-10-80 ⁸ .	Wayne Hoff	107, 11 th Ave NW Mandan
3-10-80 ⁹ .	Charles Moore	110 W. Main Mandan N.D. 58555
3-10-80 ¹⁰ .	Patricia Hernandez	604 8 th Ave. N.W. Mandan, N.D.
3-10-80 ¹¹ .	Margaret Moser	107-10 th Ave NW Mandan
3-10-80 ¹² .	Anton G. Moser	107-10 th Ave NW Mandan
3-10-80 ¹³ .	Cheryl Moser	107 10 th Ave NW Mandan
3-10-80 ¹⁴ .	Bernadette Greig	107-10 th Ave NW Mandan

3-10-80 15.	Kenneth O. Hermann Sr.	604 8 th AVE N.W. Mandan
3-10-80 16.	Orkel M. Samuelson	109 18 th Ave. NW. Mandan
3-10-80 17.	Lorraine L. Ketting	1101-1st. N.W. Mandan
3-10-80 18.	Cherlette Ketting	1101-15 th N.W. Mandan
3-10-80 19.	Jester Blott	109 11 th Ave. N.W. Mandan
3-10-80 20.	Jeffrey B. Farnes	1201 1 st St. N.W. Mandan
3-10-80 21.	Earl P. Torres	120 1 st St. N.W. Mandan
3-10-80 22.	Mary Tomanch	1203 N.W. Mandan N.R.
3-10-80 23.	Ralph Beckler	1207 1 st St. NW. Mandan N.D.
3-10-80 24.	Miane Beckler	1207 1 st St. N.W. Mandan, N.D.

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	<u>NAME</u>	<u>ADDRESS</u>
1.	Mrs. M. M. Leonard J. Smith	1206 Sunny Rd.
2.	Michael A Brady	304 6th SE
3.	St. A. Brady	1402 west main
4.	Albert J. Petrosak	1304 Sunny Rd.
5.	Tina M. Santorano	1211 W Main
6.	Mr. + Mrs. V. G. Lett	1211 W Main
7.	Richard Mangano	1109 1st St SW Mandan
8.	Otto Johnson	1107 1st S.W. Mandan N.D.
9.	Ed Lett	213 - 3rd Ave SW Mandan N.D.
10.	Charles Leingong	1109-1st St. SW. Mandan, N.D.
11.	Martin Beckel	707 - 1st NW Mandan N.D.
12.	Joe Novotny	1107 - 6th St NW
13.	Richard Hansen	100 10th Ave. N. W. Mandan
14.	Stanley M. Hoffert	1109 - 1st NW Mandan
15.		

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	<u>NAME</u>	<u>ADDRESS</u>
1.	M. H. French	101-12 th Ave N. W. Mandan
2.	Lynton B. Morrison	103-15 th Ave N. W. Mandan
3.	M. G. Eckert	108-13 A. N. W. Mandan
4.	Joell Snider	109-13 th Ave. N. W. Mandan
5.	Elizabeth Wetzel	102-13 th Ave N. W. Mandan
6.	Edith Hallman	1306 - West Main Mandan
7.	Sileen Smith	104 13 th Ave NW - Mandan
8.		
9.		
10.		
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14.		
15.		

DEPARTMENT OF TRANSPORTATION

OFFICE OF DIRECTOR

1111 N STREET
SACRAMENTO, CALIFORNIA 95814
(916) 445-2171



March 11, 1980

Rail Carrier Docket ONAC 80-01
Standards and Regulations Division (ANR-490)
U.S. Environmental Protection Agency
Washington, DC 20460

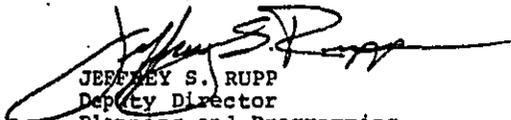
Gentlemen:

Proposed Railroad Noise Regulations

We have reviewed the proposed Noise Emission Standards for Interstate Rail Carriers which appeared in the Federal Register on Friday, January 4, 1980.

Although we have no specific comments to offer, we fully support your efforts in controlling noise from a significant noise source.

Sincerely,


JEFFREY S. RUPP
Deputy Director
Planning and Programming

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Railroad Locomotive Noise From Horns, Bells and Whistles-Appearance before the Dade County Commission DATE: March 27, 1980

FROM: Robert C. Rose, Program Manager, Railroads *Robert C. Rose*

TO: Memorandum to the Record

At the request of John A. Cavalier, Jr., Mayor, City of Miami Springs, Florida, I appeared before the Dade County Commission on March 18, 1980 concerning the Agency's regulatory position pertaining to the abatement and control of noise associated with railroad locomotive horns, bells, and whistle blowing; particularly at railroad crossings.

Relative to my testimony (which was restricted to not more than 5 minutes) because of a tight schedule I made the following points:

1. That the Environmental Protection Agency is aware of a number of cases in the country where communities and railroads have already worked together to compromise and resolve the problem. We would be glad to provide such information if requested by the Commission.
2. In view of the over-riding concern and questions of liability associated with an accident it is even more important that local communities and the railroad mutually resolve any question and share in the consequences.
3. If the Agency (EPA) is involved we will tend to further confuse the issues even more as the Federal Government will not put itself in the position of being sued.
4. The EPA has indicated in several rulemakings both proposed and final on railroad noise that we do not intend to regulate horns, bells, and whistles.
5. That to my knowledge, neither OSHA or FRA have issued any regulations that are over-riding or constrain the issue before the Commission.
6. That the legal brief written by Mr. Ginsberg, General Counsel for the Dade County Commission contains certain statements and assumptions that should be further validated or invalidated before the Commission makes a final determination on their local ordinance.*
7. That I will have our General Counsel review their legal brief and provide further discussion and guidance to this Office and the Dade County Commission.

On Thursday March 20, 1980 I met with Sam Gutter EPA OGC to discuss in detail the matter. He stated that he would look into the entire issue and the Dade County General Counsel's legal brief specifically and get back with me no later than Thursday March 27, 1980.

EPA Form 1320-6 (Rev. 6-72)

Attachment

cc: H. Thomas, R. Westlund, J. Bowman, NIS (2)



JOHN A. CAVALIER, JR., Mayor

City Hall 875 3481
Home 875 0775

February 26, 1980

Honorable Stephen P. Clark
Mayor of Dade County
Room 252 Courthouse
73 W. Flagler Street 33130

Dear Steve:

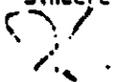
I received a copy of Robert Ginsburg's report concerning the proposed ordinances to eliminate train horns at guarded crossings.

What has happened, Steve, is that the E. P. A. tells us the state or local government can control or eliminate the horns. The state tells us the County could regulate the audible warnings. The County now tells us it is the responsibility of the Federal or State government.

The horns violate the sound levels of the County; yet Mr. Morrissey's department will not enforce the code. If you or I had an automobile that exceeded a certain noise level, we would be cited for the violation. Yet, the intensity of the horns cannot be regulated. This doesn't make sense!

Bear in mind that other cities (Hialeah, Miami Shores, North Miami, North Miami Beach, and El Portal) are also affected. I attended a meeting of over 200 North Miami residents who, like myself, cannot understand why the County cannot respond to this problem.

Sincerely,


John A. Cavalier, Jr.
Mayor

JAC/len



JOHN A. CAVALIER, JR., Mayor

City Hall 885 4581
Home: 887 6775

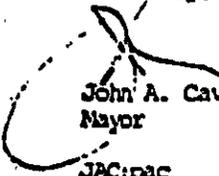
15 February 1980

The Honorable Tony Fontana
Florida House of Representatives
1003 East First Avenue
Hialeah, Florida 33010

Dear Representative Fontana:

The enclosed is an example of the "Catch-22" situation we are fighting. Please help.

Sincerely,


John A. Cavalier, Jr.
Mayor

JAC:pac
Encl.

cc: Honorable Ron Silver
P.O. Box 601035
N. Miami Beach, FL 33160

MEMORANDUM

100.01-14

Honorable Stephen P. Clark
Mayor, Dade County

DATE February 8, 1980

SUBJECT Request for draft ordinance prohibiting audible railroad warnings at certain crossings equipped with crossing gates and signal lights.

FROM Robert A. Ginsburg
Dade County Attorney

In response to your request dated November 29, 1979, for a draft ordinance concerning railroad crossing noise pollution in Miami Springs, etc., this office has engaged in extensive legal research and investigation in cooperation with Mayor John Cavalier, Jr., and the Environmental Protection Agency. We have reached the conclusion that an ordinance prohibiting audible railroad warnings at certain crossings equipped with crossing gates and signal lights is legally prohibited by both federal and state law.

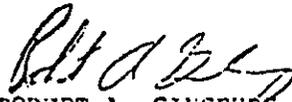
Both Congress and the District Court of Appeals for the District of Columbia have mandated that the Environmental Protection Agency forthwith issue regulations pursuant to the Noise Control Act of 1972 for all railroad equipment and facilities including horns, bells, whistles, and other audible railroad warning devices. Association of American Railroads v. Castle, 562 F.2d 1310 (D.C.App. 1977). Despite said court order, the Environmental Protection Agency, as late as January 4, 1980, has failed to follow the Congressional mandate. Federal Register, Vol. 45, No.3, January 4, 1980, page 1265. Federal law allows review of these latest regulations in the Court of Appeals within 90 days of their promulgation. It is clear that the enforcement of any county ordinance on this subject would be impossible because such regulations are vested in the Environmental Protection Agency. Conrail v. City of Dover, 450 Fed.Supp. 971 (U.S.D.C. Delaware 1978); Kappelman v. Delta Air Lines, Inc., 535 F.2d 165 (D.C. Cir. 1976), cert. denied, 429 U.S. 1061 (1977).

Even if no problem existed on the federal level, such an ordinance would conflict with state law. House Bill 919 in the 1979 Florida Legislative Session contained provisions similar to the provisions of the proposed ordinance. The Transportation Committee's comment on House Bill 919 states: "No provision is made for warning an engineer if crossing gates or warning signals are temporarily inoperative." It is this particular problem that makes such a law susceptible to successful attack. It is this precise technical problem that should be addressed by the Environmental Protection Agency in cooperation with the Department of Labor (OSHA) and the Federal Railroad Administration.

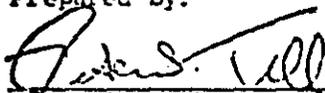
Honorable Stephen P. Clark
February 8, 1980
Page No. 2

Additionally, such an ordinance would violate Florida Statutes, Section 316.1575 which requires a motorist to stop before a crossing when a railroad train "approaching within approximately 1,500 feet of the highway crossing emits a signal audible from such distance, and the railroad train, by reason of speed or nearness to the crossing, is an immediate hazard." Likewise, Florida Statutes, Section 351.031 which requires "every railroad company shall exercise reasonable care for the safety of motorists wherever its track crosses a highway," would be violated by such an ordinance. Under circumstances such as sudden temporary automatic crossing gate and signal failure, "reasonable care" would certainly include an audible warning signal such as a whistle or horn. See Seaboard Coastline Railroad Co. v. Buchman, 358 So.2d 836 (2nd DCA 1978); Atlantic Coast Line Railroad v. Wallace, 61 Fla. 93, 54 So. 893 (Fla. 1911); Florida East Coast Railway v. Sober, 146 So.2d 605 (Fla. 3d DCA 1962).

Therefore, we must conclude that the County lacks the authority to legislate in this field.


ROBERT A. GINSBURG
Dade County Attorney

Prepared by:


Peter S. Teil
Assistant County Attorney

RAG:PST:rt
cc Mayor John Cavalieri
Commissioner Barry Schreiber
Colin Morrissey

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

1-28-80

Mayor Cavalier,

Hope this information
will be helpful. As you can see
in my letter to Mr. Zell, I did
not discuss the specifics of the
CONRAIL v City of Dover case. I
believe the facts of it distinguish
it from the problem you have in
Metropolitan Dade County, however.

Sincerely,

Helene Keflinger



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

25 JAN 1980

OFFICE OF ENFORCEMENT

Mr. Peter Tell
Assistant County Attorney
Law Department
Office of County Attorney, Courthouse
Miami, Florida 33130

Dear Mr. Tell:

With reference to your letter of December 5, 1979, I appreciate your interest and concern about railroad noise and hope that we can be of some assistance to you.

The Noise Control Act of 1972, 42 U.S.C. §4901 et seq., states "while primary responsibility for control of noise rests with State and local governments, Federal action is essential to deal with major noise sources in commerce control of which require national uniformity of treatment." Moreover, State and local responsibility for noise control was reemphasized in the Quiet Communities Act of 1978, 42 U.S.C. 4913.

As you know railroad noise is a common and pervasive noise problem which is currently regulated at the Federal and local level. At the Federal level EPA has promulgated Railroad Noise Emissions Standards, 40 CFR 201, and DOT has published proposed compliance regulations, Fed. Reg. January 14, 1976. A year later, as a result of ARR v. Costle, 562 F.2d 1310, 1321 (1977), EPA was required to regulate more fully "the equipment and facilities of interstate rail carriers . . ." The regulation required by that decision was published in the Federal Register on January 4, 1980 (45 Fed. Reg. 1252 et seq.). This regulation addresses noise from: active retarders, locomotive load cell test stands, car coupling, and switcher locomotives.

Many types of local controls on railroad noise also exist. For example, Pendleton, Oregon has a municipal ordinance forbidding engineers to blow their whistles during nighttime.

Mishawaka, Indiana, adopted the following:

Horn/whistle restriction: It shall be unlawful . . . to sound the whistle or ring the bell on such locomotive engine at any highway crossing or at any approach thereof where such crossing is protected by a watchman or automatic device, except in cases where it is apparent that vehicle or pedestrian is in a place of danger 10-4-48

In 1974 Mishawaka added:

Horn/whistle prohibition: No person . . . shall sound the whistle or horn [locomotive] upon approaching or crossing the Grand Trunk Western Railroad Company crossing at Logan Street . . .

Highland Park, California has a similar regulation:

Horn/whistle restriction: No sounding of horns except in cases of safety or emergency.

In response to the Highland Park restriction, the Assistant General Manager for Santa Fe Railway Western operations stated:

We want to comply with the city ordinance and we tell the engineers that they must comply.

Eagle Rock Sentinel
(Los Angeles, CA) May 13, 1978

EPA encourages alternate solutions to the routine use of acoustic warning devices at rail and highway crossings. For example, the elimination of public grade level railroad crossings would do away with the source of the problem -- the interaction of rail tracks and public thoroughfares. Warning gates, too, as suggested, would appear to be an effective safety alternative to acoustic warning signals. 41 Fed. Reg. 2185 (1976)

The preamble to the first EPA noise regulations also stated:

The EPA does recognize that a noise problem exists as to the use and extent of railroad warning devices and that regulatory action may be appropriate for controlling same. However, the Agency believes that such regulation can best be considered and implemented by State and local authorities who are better able to evaluate the particular local circumstances with respect to the nature and extent of the noise problem and the requisite safety considerations involved. Ibid.

One person who commented on the proposed railroad regulations suggested that roadway drop gates equipped with flasher units provide visual warning that is adequate without acoustics signals. 41 Fed. Reg. 2185(1976).

There are two general restrictions on local control of railroad noise: the commerce clause and Federal pre-emption. The commerce clause, as you know, restricts undue burdens on interstate commerce. The preemption argument raised in CONRAIL v. City of Dover, 450 Fed. Supp. 966 (1978) (in which CONRAIL prevailed against local legislative attempts to regulate railroad noise in a marshalling yard), was that federal noise regulations were intended to be applicable to all phases of railroad operations. The CONRAIL decision from the Third Circuit notwithstanding, the Noise Control Act makes it clear that State and local governments have the power to regulate some local conditions which require special local treatment. In discussing special local conditions and possible local variances, AAR v. Costle, at 1313, states that §17(c)(1) of the Noise Control Act " . . . performs a valuable function in its recognition that local conditions may dictate some degree of flexibility in the approach to noise control . . ."

Unfortunately NED does not have the resources to write an ordinance for Metropolitan Dade County. It is my hope that the information we have been able to provide will be of some assistance to you. In addition, I have added comments to the margins of the proposed ordinance which you provided. I will be happy to review any proposed ordinance which may be prepared by Metropolitan Dade County.

According to my files, the City of Miami Springs, Florida, was conducting periodic "Roundtable discussions" with representatives of the Florida East Coast Railway and other officials in an effort to resolve noise problems from

existing and new railroad yards and other railroad facilities (1978). I would be interested in hearing if these discussions were at all successful.

I also thought you might be interested in the enclosed correspondence on a related issue.

Sincerely yours,

Helen B. Keplinger

Helen B. Keplinger
Law Clerk

Regional, State and Local Programs
Noise Enforcement Division

Enclosure

cc: Mr. James Orban
Mr. Robert Bruce

SUGGESTED WORDING FOR PROPOSED ORDINANCE

Sec. 1: Audible warnings by trains are prohibited at certain railroad grade crossings. Whenever any train approaches a railroad grade crossing which is equipped with crossing gates and signal lights, no audible warning shall be required of the train, except in case of emergency. However, if two or more railroad grade crossings are located within a distance of 1,500 feet or less of each other and one or more of the crossings is not equipped with crossing gates and signal lights, the audible warning shall be made at all such crossings. Violation of the provisions of this section shall be a misdemeanor of the second degree, punishable by fine.

perhaps specific named crossings would be better; the ordinance could be written to include future crossings which may later be equipped with appropriate warning devices;

this does not mean anything

Sec. 2: When a train approaches any railroad grade crossing which is equipped with crossing gates and signal lights, any audible warning is not required, except in case of emergency.

Sec. 3: All motorists approaching a railroad crossing shall exercise reasonable care for their own safety and that of their passengers and for the safety of railroad train crews operating trains across such crossings.

Substitute: it shall be unlawful to sound a locomotive whistle, bell, horn or other warning device...



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D. C. 20460

25 JAN 1980

OFFICE OF ENFORCEMENT

Mr. Robert J. Bruce
3900 County Line Road, Apt. 9-D
Tequesta, Florida 33458

Dear Mr. Bruce:

We have received a copy of your letter of January 10, 1980, to Mr. Charles Elkins. We appreciate your interest and concern about railroad noise and hope that we can be of some assistance to you.

As you know railroad noise is a common and pervasive noise problem which is currently regulated at the Federal and local level. There are certain Federal regulations which must be uniform throughout the United States so that railroads which are engaged in interstate commerce will not be subject to new laws at each state border. At the same time, however, state and local laws may also regulate railroads so long as these state and local laws do not conflict with the Federal laws. States and localities may also request and be granted special exemptions to enact their own laws where special local conditions exist.

I have enclosed a copy of a letter I have recently sent to the Metropolitan Dade County, Florida, Assistant County Attorney, Mr. Peter S. Tell. Metropolitan Dade County authorities are well aware of the hardship being experienced by citizens like yourselves who live near railroad/highway crossings. Metropolitan Dade County is trying to determine if it is feasible to re-write local law or to write new law to control railroad noise. If Metropolitan Dade County either amends existing law, or writes new law, you may experience relief from the noise pollution in your area in the future.

You asked if it is Florida law that engineers must whistle a given number of times at a crossing. For such specific information I suggest you contact Mr. Tell's

office. However, the letter which you enclosed from Mr. Wyckoff, Senior Vice President of the Florida East Coast Railway Company, states that, "Florida law provides that a car must stop when an audible sound is sounded 1500' in advance of a crossing ..." He then states that "railroads have imposed the whistle operating rule to insure that all necessary precautions are taken to protect the public and to prevent the railroad from being liable in case of an accident." Therefore, it appears that the whistle operation is merely a railroad procedure, but not required by Florida law.

I recommend that you contact the Metropolitan Dade County, County Attorney's Office to register your specific complaints about railroad noise. You might also contact the Florida East Coast Railway Company again and inquire if the "round-table discussions" on railroad noise for public officials and railroad representatives, which were held as recently as 1978, might be revived to discuss this problem. You might also contact your local mayor to suggest that certain crossings have local curfews imposed during nighttime, where there are other safety devices at the crossing such as crossing gates and lights.

I hope there will soon be some local solution to your problem. Please contact us again if we can provide other assistance.

Sincerely yours,

Helen Keplinger
Helen Keplinger
Law Clerk
Noise Enforcement Division

Enclosure

cc: Mr. Peter Tell
Mr. Charles Elkins
Mr. James Orban

January 19, 1970

Mr. Charles L. Elkins
Deputy Assistant Administrator
for Noise Abatement & Control
Environmental Protection Agency
401 M Street SW
Washington, D.C. 20460

Dear Mr. Elkins,

Enclosed are copies we have received of letters from Mr. R. W. Wyckoff of the Florida East Coast Railway Company. We realize the railroad was here first but also feel the noise which is horrendous could be toned down.

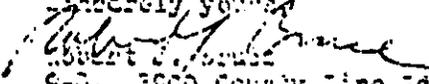
When we moved here last June, contrary to what Mr. Wyckoff says regarding the law on the number of whistles, the trains were at that time whistling only three times. Since early fall this number has increased to four and as many as seven long blasts. He also states that the engine is supposed to whistle until it is on the crossing, but in reality many keep blasting long after that. We would like to know if this is really the law. At this point it would be impossible for a train to stop anyway.

The crossing is on a minor road (County Line Road in north Tequesta). There are approximately nine to twelve trains a day and several times between 5am and 5am in the morning they switch slowly back and forth on a switching track just south of the crossing. Last week and again last night was the worst yet with constant blasting of the whistles and switching for hours. With twin lights on the engines plus automatic crossing barricades with lights and bells, and absolutely no traffic at this time of night, we feel the noise is entirely unnecessary and very damaging to everyone's nerves.

When the trains pass, it is impossible to hear television, talk on the phone or carry on a conversation even with the windows closed. At night we all (neighbors) must keep our windows closed and air conditioning on which is a waste of energy, and are still blasted out of bed. Last summer we had many birds coming to our feeding station, we have none now and wonder if it has something to do with the noise.

We would appreciate it if you could check the railroad laws and come up with recommendations that might make everyone living in this area happier and cut down on the noise pollution.

CC: ✓ Norman Thurston, Deputy Asst.
Adm. for Public Service &
Noise Enforcement
Selbert Barth, Deputy Asst.
Adm. for Health & Ecological
Effects

Sincerely yours

Robert J. Smith
9-3, 3900 County Line Rd.
Tequesta, Florida 33452

December 8, 1979

Mr. W. W. Wyckoff
Genier Vice President
Florida East Coast Railway Company
1 Malaga Street
St. Augustine, Florida 32084

Dear Sir,

Please refer to our letter of August 13, 1979 (file:79.12).
As of this week the whistle signals are deplorable here at
the crossing in Tequesta, Florida at County Line Road.

From the hours of 11pm to 5:30am, we are now having any
where from four to eight trains. They are now blowing
their whistle not only at the 1500 ft from the crossing
but from 4 to 7 times starting around 1500 ft. and continuing
all the way thru the crossings. These are not toots but
long long blasts that raise you right out of bed.

We certainly understand the necessity for the whistles
and at 1500 feet can live with it but we do not see any
reason for the continuous long blasts all the way to
the crossing and ironically many times way after the engine
has past the intersection, especially at night with the
double headlights on your engines which can be seen for
a mile approaching, and also the flashing lights and
wooden barriers at the crossing, plus the fact that there
is little or no traffic at this time of night on this
secondary country road.

They even blow their whistle this week while sitting still
by the switches. Besides all this, there isn't one of
these freight trains that could possibly stop inside of 1/2
mile regardless. While on the subject of objectional
noise, I believe you also have a bad section of track just
south of the County Line Road Crossing at the switch because
when every car hits this piece of roadbed, it makes alot of
noise.

We hope you will look into this situation immediately. If
it can not be resolved in ten days we have decided to write
the Noise Abatement & Control Center at the Environmental
Protection Agency in Washington, D.C.

We feel our nerves and that of our neighbors can no longer
tolerate this noise.

- 45 -

Sincerely yours,

FLORIDA EAST COAST RAILWAY COMPANY

ONE MACLEOD STREET, SEASIDE A, FLORIDA 32084

OFFICE OF SENIOR VICE PRESIDENT

December 12, 1979

File: 79.12

Mr. Robert J. Bruce, Apt. 9-D
3900 County Line Road
Tequesta, Florida 33458

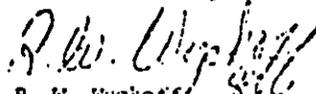
Dear Mr. Bruce:

I have your letter of December 8, 1979, concerning the sounding of whistle signals at the County Line Road crossing in Tequesta, Florida.

As I explained to you in my letter of August 17, 1979, it is a requirement that Locomotive Engineers of the Florida East Coast Railway sound whistle signals at all crossings, regardless whether public or private and regardless of whether protected by automatic crossing protection or not. This is obviously, a safety requirement and the type of whistle signals which must be sounded are standard and consist of two long blasts, one short blast and a final long blast which must continue until the engine is blocking the crossing.

With respect to noises emanating from our track just south of County Line Road crossing, this matter is being checked by our Roadway Department to see if there is any way that the noises can be minimized.

Yours very truly,


R. W. Wyckoff
Senior Vice President

RJM/v



FLORIDA EAST COAST RAILWAY COMPANY

ONE PALMACHA STREET, ST. AUGUSTINE, FLORIDA 32086

OFFICE OF SENIOR VICE PRESIDENT

August 17, 1979

File: 79.12

Mr. & Mrs. Robert J. Bruce
9-D 3900 County Line Road
Tequesta, Florida 33458

Dear Mr. & Mrs. Bruce:

I have your letter of August 13, 1979, concerning the sounding of whistle signals at railroad crossings.

Locomotive engineers are required to sound crossing signals for any crossing, regardless of whether it is private or public, or regardless of whether it is protected by automatic crossing protection or not.

Florida law provides that a car must stop when an audible sound is sounded 1500' in advance of the crossing (Section 316.054 Florida Statutes). This requires that approaching trains make their presence known 1500' in advance of a crossing and the railroads have imposed the whistle operating rule to insure that all necessary precautions are taken to protect the public and to prevent the railroad from being liable in case of an accident.

One way, of course, to reduce the sounding of whistle signals is to reduce the number of crossings and the Florida Department of Transportation has regulatory authority over public railroad crossings, including authority to issue permits for the opening and closing of such crossings (Section 338.21 Florida Statutes). Therefore, you may wish to investigate the possibility of having the offending crossing or crossings eliminated. Elimination of crossings may be sought through the local government body having jurisdiction in the area.

Insofar as concerns the sounding of whistle signals, the Railway has its supervisory personnel constantly policing its engineers to insure that there is no unnecessary sounding of whistle signals. Prescribed signals, however, are required for each crossing and the tone of the whistle is pre-set so that the individual engineer cannot alter its tone or velocity. Therefore, in order to conform with the requirements of Florida law and provide the greatest degree of safety possible to the traveling public, it will be necessary for the Railway to continue to have its locomotive engineers sound prescribed crossing signal whistles.

Yours very truly,

R. W. Wyckoff
Senior Vice President



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North Miami Beach, Fla. 33162
Apt: 503

Rail Carrier Docket
CMAC 80-01
Standards and Reg. Div ANR-490
U. S. Environmental Protection Agency
Washington, D. C. 20460

Dear Sir:

Last year I purchased a condo at the Greynolds Park Club and the real estate sales person told me the railroad only passes about 4 times per day. I moved in on Tuesday the 26th of Feb. and received the shock of my life. Approximately every half to three quarters of an hour throughout the night the clanging trains came ringing their horns several times as they approached our area, virtually devastating both my wife and I.

In the midst some of the highest priced residential real estate in the North Miami Beach area, to be confronted with this intolerable noise pollution is a complete mystery. My first efforts were aimed at the Fla. East Coast Railroad and some fine gentleman informed me emphatically that FEDERAL LAW requires the motorman to clang away as he approaches intersections even though there is sufficient warnings at these crossings and gates, red lights etc. The mystery is why is it necessary to blow these ear shattering horns, particularly when the Government is endeavoring to cut noise pollution from automobiles. There is no comparison between the nerve shattering horn from the trains as opposed to the automobiles.

Granted the trains were here first and the Government law might have been enacted when the INDIANS were still roaming the plains, but when we have a cosmopolitan area of high priced residences, such as Aventura, Century 21, Del Prado, Turnberry Isle, Greynold Park Apts, etc, it would appear that this law should be changed.

There are solutions to this simple problem by building overpasses in these areas, etc, and I for one would gladly contribute to its cost, IF NECESSARY.

If we are living in a civilized metropolis there is no question that some remedial correction should be made of this unendurable and most devastating condition. My next question would be is Why would the Govt. permit Real Estate Developers to build in this close proximity to the RAILROAD.

I am virtually imploring you to do something about this problem and would appreciate hearing from you.

Sincerely yours,

Sol Matza
Sol Matza

*Somethin
MVS
- 80
- 100*

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Department of Transportation

PLANNING AND RESEARCH DIVISION
800 LINCOLN WAY AMES, IOWA 50010 515-296-1661

March 17, 1980

REF. NO. 766.

Rail Carrier Docket ONAC 80-01
Standards & Regulations Division (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Sir:

Mr. Henry E. Thomas' letter of January 24, 1980, explaining the final EPA railroad specific source noise standards also indicated that comments are being accepted on the rail yard receiving property line standard currently under development.

Sections 201.17 and 201.30 through 201.33 of the originally proposed standards (44 FR 22960, April 17, 1979) have been reviewed by the technical staff of the Iowa DOT. Although, our experience with rail yard noise matters has not been extensive, it is felt that the standards represent reasonable limits. It is further felt that while we are unaware of major problem areas in our State relative to rail yard noise, our agency would have sufficient capability to determine compliance with the proposed rule as described in these Sections if the need arises.

Iowa's primary concern regarding the proposed noise regulations is their economic impact on the financially troubled railroads serving this State. The overall economic impacts on these marginal or bankrupt railroads should be thoroughly investigated before the new regulations are enacted.

It is suggested that the use of the FHWA Highway Traffic Noise Prediction Model (SNAP 1.0 or STAMINA 1.0) be considered instead of Mod 04 as originally required for estimating the motor vehicle traffic noise component hourly equivalent sound level or day-night sound level. This would allow consistency between EPA and U.S. DOT-FHWA relative to required procedures for estimating highway traffic noise.

The opportunity to comment on this proposed regulation is appreciated.

Sincerely,
[Signature]

C. I. MacGillivray
Director
Planning & Research Division

- 49 -

CIM:GH:ss

JAMES H. BUSKER
Sioux City

BARBARA DUNN
Des Moines

G. ROGER FAIR
Davenport

DONALD K. GARDNER
Cedar Rapids

WILLIAM F. McGRATH
Maquokette

ROBERT R. RIGLER
New Hampton

BRUCE H. VAN DRUFF
Red Oak

Vertical stamp: 3 13 80

ASSOCIATION OF
AMERICAN RAILROADS

LAW DEPARTMENT
AMERICAN RAILROADS BUILDING • WASHINGTON, D. C. 20036 • 202/293-4086

HOLLIS G. DUENSING
General Attorney

April 4, 1980

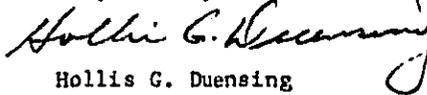
Rail Carrier Docket ONAC 80-01
Standards and Regulations Division
(ANRO-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

Re: Docket No. ONAC 80-01, Noise Emission
Standards for Transportation Equipment;
Interstate Rail

Gentlemen:

Enclosed for filing in the above-captioned proceeding are the original and three copies of the Comments of the Association of American Railroads.

Respectfully submitted,


Hollis G. Duensing

enc.

BEFORE THE
UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
Office of Noise Abatement
and Control

Proposed Noise Emission Standards)	Rail Carrier Docket
for Transportation Equipment;)	Number ONAC 80-01
Interstate Rail Carriers.)	(ANR-490)
40 CFR Part 201)	

COMMENTS OF THE ASSOCIATION
OF AMERICAN RAILROADS

Association of
American Railroads
1920 L Street, NW
Washington, DC 20036

April 4, 1980

INTRODUCTION

These comments are filed on behalf of the members of the Association of American Railroads (AAR) in response to the invitation by the Environmental Protection Agency (EPA), published at 45 Fed. Reg. 1252 (1980), for comment on the proposed property line noise standards for railyards. AAR submitted extensive comments on this subject on July 2, 1979, but a supplemental discussion of certain aspects of the proposed property line noise standards might aid EPA in its quest for fair and reasonable regulations.*

It must be noted at the outset that the only proposed property line standards available for public comment are those proposed by the EPA in the Federal Register of April 17, 1979. (44 Fed. Reg. 22959 et seq.) The AAR submitted comprehensive comments which addressed those proposals, the relative merits of abatement techniques identified by the EPA, and the potential costs of implementing those techniques. The EPA acknowledges that it must undertake "additional study and assessment necessary to address the complex issues associated with the proposed property line noise standard..." and the AAR would welcome an opportunity to participate in such study and assessment. During the period

* In addition, this opportunity for further discussion enables the AAR to include comments responsive to certain questions posed by Mr. Henry Thomas in his letter of August 27, 1979. The balance of Mr. Thomas' questions were answered in separate correspondence.

from September 1977 through the beginning of 1979, the EPA and the railroads exchanged test data and generally cooperated in an effort to build a data base upon which reasonable action could be taken. The EPA was given open access to rail yards and facilities. The railroads would now like to have the opportunity to reestablish a cooperative effort in the further development of the property line standards.

Subsequent to the time the comments were filed with the EPA on July 2, 1979, interested parties have been given no alternatives on which to comment. While we know that the EPA was influenced by the comments filed in July 1979 to seek additional time from the United States Court of Appeals for the District of Columbia Circuit for the promulgation of a property line standard, little indication has been given of EPA's reaction to those comments. It is thus extremely difficult to ascertain whether there has been any change in EPA's views on property line standards from its expression in the Notice of Proposed Rulemaking nearly one year ago. Thus the AAR must incorporate by reference its previous comments in their entirety in this statement.

In the commentary preceding the point source regulations published in the Federal Register of January 4, 1980, the EPA discussed several subjects which may be relevant to its further consideration of the property line standards. In addition, there are specific provisions in the published

regulations themselves which lack a supportable basis in the record of this proceeding, particularly as they may apply to reasonable property line standards. While the previous comments filed by the AAR addressed these points in detail, prudence dictates that we now comment again on these matters.

The L_{dn} Descriptor

In the "Background Document for Final Interstate Rail Carrier Noise Emission Regulation: Source Standards" (EPA 550/9-79/210), the EPA noted that it "...believes that it should spend more time analyzing available data concerning the L_{dn} descriptor rather than issue a standard quickly." Since the Agency provides no indication of its reaction to the comments filed by the AAR on this subject, we are compelled to urge that the EPA reexamine the AAR's comments which conclusively demonstrate that the proposed receiving property standards are unreasonably low, that the EPA record contains no identifiable abatement techniques which are feasible or cost effective, and that the EPA cannot justify the use of the L_{dn} descriptor in the railroad property line standards. (AAR July 2, 1979, Comments, pp. 104-126)

The EPA should reject the proposed use of the L_{dn} descriptor for three reasons. First, the Agency has no technological or economic studies which demonstrate how society as a whole or the railroads in particular can meet the EPA's expressed intention of obtaining an L_{dn} of 75dB now and an L_{dn} of 65dB in the near future in all communities.

Second, in "experimenting" with the use of the L_{dn} descriptor as a standard rather than just as an analytical tool, the Agency would impose its experiment on the one industry for which it would be eminently unreasonable to penalize nighttime noise. Third, by proposing the application of this standard to commercial property where generally there are no people attempting to sleep, the L_{dn} descriptor does nothing to achieve the health and welfare objectives which the EPA purports to achieve. It would impose enormous costs totally disproportionate to any benefit to the public.

Definition of Receiving Property

In the final source regulations published on January 4, 1980, the EPA defines "receiving property" as including "any residential or commercial property" (40 CFR §201.1(w)) and defines "commercial property" as including land used for specific purposes designated by the EPA in the "Standard Land Use Coding Manual." (U.S. DOT/FAWA)(40 CFR §201.1(e)) Properties devoted to such uses as "Farm products warehousing and storage," "Stockyards," "Refrigerated warehousing," "Food lockers," "Household goods warehousing and storage," "General warehousing and storage," "Automobile repair services," "Automobile wash services," "Other automobile services," "Roller skating," and "Bowling" are but a few examples of so-called "commercial property" for which the EPA feels some recognizable benefits can be derived. The

record contains no analysis of the benefits which could be achieved by reducing railroad noise in the vicinity of any commercial establishments,* and there is absolutely no rational basis for including the specific commercial properties listed above in the protected group. It is not justifiable with respect to point source standards, and it is even less justifiable with respect to property line standards. The AAR urges the EPA to revise substantially the definition of "receiving property" by eliminating such categories as warehouses, storage facilities, stockyards, automobile repair and washing facilities, and bowling alleys from the definition of "commercial property."

BARRIERS

In promulgating the final point source standards, the EPA stated it was not prescribing specific noise abatement techniques but instead was prescribing performance standards, giving the railroads the discretion to implement whatever techniques they feel are necessary to meet the standards. While there is merit in the flexibility afforded by this approach, the EPA cannot promulgate standards unless it first demonstrates that cost-effective technology for the abatement

* As a practical matter, "commercial" properties consist of access roads, parking lots, and buildings. The access roads and parking lots deserve no more "protection" than city streets which the EPA does not propose to include in the protected group. The activities conducted on the commercial properties are normally indoors and thus are effectively insulated from noise in the surrounding area.

of noise exists. Since it seems likely that the EPA will extend this performance approach to the property line standard, it is essential that the EPA make a more detailed analysis of the cost and effectiveness of the various abatement techniques it has identified.

The use of barriers has been suggested as one of the primary means of controlling noise radiated into the community from various railroad sources. It has further been suggested that when the construction of such barriers near the source is not feasible, a situation the EPA acknowledges occurs often, the barriers be constructed at the railroad property line. It is well known that barriers are most effective when located close to the source or close to the receiver. When located at points midway between the source and receiver, as would be the case at the boundary of many railroad yards, the barriers are less effective and thus must be proportionately higher and longer than would be required at locations closer to the source or the receiver. When developing the property line noise standards, consideration must be given to the technological feasibility and the cost of constructing unusually high and long barriers at the boundaries of railroad yards. Additional consideration should be given to undesirable side effects from barriers, such as the intensification of noise on the other side of the barriers or aesthetic problems. If the EPA does rely on barriers as a primary noise abatement technique, it must make a far more

detailed analysis of the cost and effectiveness of barriers than any previously published.

Noise Impact Model

The EPA has apparently concluded that even with the point source standards and the proposed property line standards in effect "...there would be an appreciable number of people in the nation who would still suffer significant adverse effects of railroad noise..." (December 1979 Background Document, pp. 1-2). The EPA reaches this conclusion on the basis of the Agency's health and welfare analysis of its noise impact model. In relying on its noise impact model, the EPA has created an artificial problem. Because of the inaccuracies and deficiencies of the model, it cannot serve as the basis for accurately estimating the number of people currently adversely affected by railroad noise and cannot serve as the basis for EPA's conclusion that even with all of its proposals in effect an appreciable number of people in the nation would still suffer significant adverse effects from railroad noise. The EPA railyard noise impact model undoubtedly overestimates the true impact of railroad noise by leaving out other noise sources which may be major contributors to the noise level in a community. The analysis in Appendix A of Exhibit A, submitted by the AAR in July 1979, shows that noise from non-railroad sources such as motor vehicles and aircraft is often comparable to the noise emanating from railyards. As the distance from a railyard

property line increases, the amount of measurable noise from the yard decreases so that noise from sources which are not as localized as railyards should become more pronounced in relation to railroad noise. This is an important consideration since railyards are often located near commercial or industrial areas, airports, and highways.

An examination of available data leads to the conclusion that railroad noise does not jeopardize public welfare and not even the EPA suggests that railroad noise impairs public health. Table 4-8 from EPA's February 1978 Background Document, shows typical property line day and night L_{eq} values in the mid 60's to low 70's. Such noise levels are similar to those found near urban row housing on a major avenue and high density urban apartment areas. Furthermore, the number of people exposed to railroad noise is small in comparison to the number exposed to noise sources such as trucks, airplanes, and lawnmowers. In fact, EPA's noise impact model probably overestimated the impact of noise on a community by making a questionable assumption concerning population distribution around a railyard. EPA's model assumed that people in the areas around railyards were uniformly distributed. Although no detailed data on population density around railyards exists, it seems reasonable to assume that population density increases with distance from a railyard since most yards are adjacent to industrial and commercial facilities, and some distance away from

residential areas. If population density does increase with distance from a railyard, EPA's noise impact model must have overestimated the impact of railyard noise since the sound level from a noise source decreases with the distance from that source.

In the commentary preceding the final point source standards, the EPA attempted to defend its noise impact model. The points it raises in defense are mere conjecture at best. For each of the elements which the AAR criticized in its July 1979 comments, the uncertainty could be as high as 10 to 15 percent. The cumulative effect of all such elements is likely to be substantially greater.

Measurement Methodology

In the past the AAR has pointed out that noise measurements taken two meters from the surface of a residential building would artificially increase source levels by as much as 3dB as compared to the free-field measurement. This effect is caused by surface reflections. At two meters from a surface, reflections would contribute up to one-half of the total acoustic energy, thereby increasing noise level measurements for distant noise sources by as much as 3dB. Although the AAR clearly discussed this effect on page 136 of its July 1979 Comments and page 40 of Exhibit A to those Comments, EPA chose to disregard reflection problems when promulgating noise source standards. In fact, without opportunity for comment and without assessment of the impact

on the railroads, the EPA expanded their measurement methodology to include measurements next to commercial buildings as well as residential buildings. This effectively eliminates any requirement for free-field measurements. Thus it is unclear whether the maximum noise levels permitted are those set in the regulations or as much as 3dB less than the published levels. If EPA's intention is that the noise levels stated in the final source standards and proposed property line regulations should govern, it must clearly provide for a 3dB allowance when the measurement is made two meters from a building or other reflecting surface. However, if EPA decides that maximum noise levels should be 3dB less than those stated in the final source standards and proposed property line regulations, new cost of compliance estimates and new studies of technological feasibility must be made.

Nondegradation

Certain commentors on the April 17, 1979, proposed rulemaking have urged the EPA to include a nondegradation clause in its property line standard to prevent the railroads from increasing noise at yard facilities which are relatively quiet even though such an increase would not result in a violation of the Federal standards. In response to those comments, the EPA on page 7-15 of the December 1979 Background Document has expressed an intention to consider the issue of nondegradation in developing its property line standard.

While the industry appreciates these concerns

regarding nondegradation, the EPA has no authority to impose such a requirement. A clear reading of the statute, supported by the legislative history, reveals no Congressional intent to inhibit railroad growth (or curtail railroad operations for that matter) as a noise abatement technique. On the contrary, Congress' primary purpose in enacting Section 17 was to insulate the railroad industry from state and local noise regulation which could unduly burden the industry and stifle its growth and operations. Thus a nondegradation clause would contravene Congressional intent.

In actual practice the railroads often plan railroad development away from noise sensitive areas, e.g., the construction of new yards in rural areas. However, the needs of the shippers they serve as well as economic and labor circumstances often dictate that existing yards have to be expanded to absorb increased demands on railroad facilities. No support can be found for the proposition that Congress intended to undercut the railroads' prerogative to make such business decisions as whether to expand yards or construct new ones on account of the noise factor.

Lack of growth for the railroads results in the loss of railroad service. The Attorney General of the State of South Dakota expressed the concern of communities threatened with a loss of railroad service. (Dkt. No. 006) In large measure the State of South Dakota's concern reflects the Congressional intent to provide uniform railroad noise

regulations which do not inhibit the growth of the industry.

Railroads have an obligation to meet the increased demands of the nation's shippers and Section 17 expressed an intent that the railroads' ability to respond would not be inhibited by arbitrary noise regulation adopted in disregard of rational criteria. Congress did not intend that Section 17 be used as a mechanism for the implementation of a national transportation policy of no growth for the railroads.

The potential cost to the railroad industry and the nation of a nondegradation provision would far exceed any costs the EPA has identified in this proceeding and would exceed any measure of reasonableness required by Section 17. The inflationary impact, long-run and short-run, of a no-growth, nondegradation standard would be substantial. A no-growth rule imposed on the rail carriers would limit the facilities available for transportation, lower efficiency of rail carriage, and cause cost increases to railroads and shippers. For the foregoing reasons, we urge the EPA to reject any suggestion that it adopt a policy of "nondegradation" in the area of railroad noise.

REFRIGERATOR CARS

In deciding to defer promulgation of standards for refrigerator cars, EPA stated, "The Agency rejects industry assertions that no further noise reduction is achievable on refrigerator cars." (p. 7-13, Background Document for Final Interstate Rail Carrier Noise Emission Regulation: Source

Standards) At pages 71-83 and Appendix J of our Comments submitted on July 2, 1979, we clearly explained that present noise levels from normal operations cannot be further reduced by the standard low cost abatement methods suggested by EPA such as mufflers. Present fan noise levels are the result of many years of research and cannot be improved upon by replacement with another fan without entirely redesigning the cooling system. Noise may be reduced by blocking all engine compartment ventilation grills on each side of the car and redirecting the cooling air flow through the top of the car, but this cannot be accomplished simply and without great expense. It would involve reengineering the cooling system and would require substantial modification of the engine compartment. The AAR provided the EPA with preliminary cost estimates of \$5,000 per car or \$118 million for the entire fleet for such modifications. Any additional point source standards or property line standards which assume given reductions in noise from refrigerator cars must take into account the true cost of EPA's stated assumptions.

Response to Mr. Thomas' Questions

HEALTH/WELFARE

1. Question

What would the AAR propose as the noise impact descriptor(s) for assessing impact of rail yard noise on surrounding communities? (pp. 122-126) Would you provide your rationale for this proposal?

Response

It is the consensus of the industry that an L_{eq} noise descriptor is more appropriate than an L_{dn} descriptor. We note, however, that the EPA proposed a two hour L_{eq} standard mathematically related to the proposed L_{dn} standard. Such an arbitrary selection of an L_{eq} standard cannot be supported by the record in this proceeding. The important consideration in connection with the L_{dn} descriptor is that the railroads are not able to reduce noise emission by 10dB at night to compensate for the 10dB penalty contained in the L_{dn} definition.

2. Question

What data or other information does the AAR have to support your view that rail yard noise has no greater impact (on surrounding communities) at night than during day time?

Response

It is not our view that railyard noise has no greater impact at night than during the day. What we have said is that imposition of a noise standard that penalizes nighttime noise by 10dB in commercial and industrial areas is unnecessary because people generally do not sleep in such areas. Use of the L_{dn} descriptor to control rail yard noise is unreasonable regardless of the nature of the surrounding land uses because a 10dB penalty requires a reduction in the level of sound energy by a factor of 10 which is impossible to achieve while still maintaining the unimpeded flow of commerce by rail throughout the nation. (See AAR Comments of July 2, 1979,

pp. 111-121.)

3. Question

What data or other information does the AAR have to support your (view that) non-rail yard noise sources are generally at the same level or greater than rail yard source noise? (pp. 122-126)

Response

Although we make no such claim in our comments, we recognize that in many situations rail yard noise is very difficult, if not impossible, to isolate from the surrounding community noise. The analysis in Appendix A of Exhibit A (Wyle Research Report WR 79-10) clearly shows that, even at measurement sites on railroad property, the L_{eq} due to non-railroad sources such as motor vehicles on nearby roads and aircraft flying overhead is often comparable to that from specific railroad noise sources. At points within the community, the levels of railroad noise should be less than at the measurement sites while the levels of the non-railroad noise should be about the same, so that non-railroad noise will be even more pronounced than at the measurement sites. This is clearly illustrated when attempting to measure rail yard noise near a highway, airport, manufacturing district, or other busy areas. This fact was clearly considered by EPA in issuing its final measurement procedure since it is designed to exclude from consideration those areas where the background noise levels are within 10dB of the railroad noise.

4. Question

What data or other information does the AAR have to support the view that annoyance due to rail yard noise does not have an adverse public health and welfare impact? (p. 130)

Response

Our Comments on pages 129-130 note the fact that railroad noise is capable of constituting an annoyance at some locations some of the time. Noise data shown in the proposed background document show typical property line day and night L_{eq} values in the mid 60's to low 70's range which are similar to noise levels found near urban row housing on a major avenue and high density urban apartment areas. Railroad noise is highly localized and activities producing noise levels almost always are confined to the same general areas of a rail facility. The numbers of people exposed to such noise are very small in comparison to those exposed to other, more pervasive noise sources such as trucks, airplanes, and lawnmowers. The correlation between "public health and welfare" and "annoyance" has never been properly defined. The community noise levels caused by railroad operations, as reported in the Background Document, by themselves are not high enough to have an impact upon the public health. There has been no showing in this proceeding of any impact on public health at all. Whether or not those noise levels are sufficient to significantly impact the public "welfare" is a matter of speculation only since "annoyance" has never been properly

quantified. For EPA to say that railroad noise jeopardizes public health, even though it can at most be classified as annoying, is at best an exaggeration and a conclusion without support in logic or fact.

5. Question

What data are there to support the AAR view that leaving out many non-rail yard sources from the analyses does not underestimate the impact? (p.127)

Response

The analysis of why it is felt that the EPA railroad yard noise impact model may underestimate the true impact is presented in Section 4.0 of Exhibit A in our earlier comments.

6. Question

Could the data used to conclude that non-rail yard noise sources that are dominant at a particular location are also equally dominant through the entire community, be provided us? (p. 131)

Response

The analysis in Appendix A of Exhibit A showed the dominant non-railroad noise sources to be aircraft and motor vehicle traffic. Noise from such mobile sources is generally widespread over a given area. At locations further from the railroad yard (the analyzed measurement sites being generally on railroad property near the edge of the yard), it could be expected that noise from aircraft and motor vehicles would even further dominate the overall noise levels.

7. Question

Could the supporting data or analyses used to conclude that it is incorrect to consider that some community areas are impacted by several rail yard noise sources be made available?

(p. 131)

Response

No such contention is made. If the objective of property line or receiving property standards was the reduction of the computed average noise level and that objective was met, it would be illogical to count the impacted people twice simply because the total noise affecting such people prior to the application of successful abatement techniques emanated from separate railroad sources. Moreover, this question tends to suggest that the EPA failed to understand the deficiencies in its health and welfare model. In its earlier Comments at page 131, the AAR correctly contends that the EPA's model was deficient because of its decision to consider only railroad noise thereby including people as benefiting from a reduction in railroad noise even in circumstances in which a complete elimination of railroad noise would have little or no beneficial impact on the community because of the presence of non-railroad noise.

8. Question

Would the supporting data or analyses used to conclude that a non-uniform population density around a rail yard results in a significantly different impact magnitude than a uniform

density be made available? (p. 132)

Response

Since the sound level from a source falls off with distance from that source, a non-uniform population density which increases with distance from the source there must be a smaller impact than would be the case were the population density uniform within a given distance from the source and assuming that the total population remains constant.

9. Question

Do you have any data or other information to indicate that there are no cases where the population density decreases with distance from rail yards? (p. 132)

Response

No detailed data on the change in population density with distance from a yard is known to us. Since most yards have industrial and commercial areas on at least some of their boundaries, with residential areas generally lying beyond, it seems reasonable that population density increases with distance from the yard. To the extent this assumption is correct, the EPA's health and welfare model overestimates the number of people adversely affected. Importantly, the EPA model relies largely on speculation to support its assumption that there is a uniform distribution.

GENERAL QUESTIONS

1. Question

In the AAR's analysis of technology and cost, what assumptions or data have the AAR used with respect to the number of rail

yards for which the day-night equivalent sound levels are clearly dominant with respect to receiver property measurement locations?

Response

The record in this proceeding contains no definitive data indicating the number of rail yards for which the day-night equivalent sound levels are clearly dominant at receiving property measurement locations. It is assumed that those facilities listed in the SRI study of Classification Yard Technology as being adjacent to residential or commercial property may be subject to any standard utilizing such a measurement approach. That information, according to the authors, is intended to be a general guide indicating predominant land use characteristics surrounding a yard and not a definitive listing to be used in an analysis of regulatory impact. Therefore, we have not developed any assumptions regarding the number of yards with noise levels dominant at receiving property measurement locations.

2. Question

In the AAR's analysis of technology and cost, what assumptions or data have the AAR used with respect to either the distance between the rail yard property line and receiver property measurement locations, or the amount of noise attenuation achieved due to any buffer regions separating the rail yard property line from receiver property measurement locations?

Response

The AAR has made no assumptions and the record in the proceeding contains very little data concerning the distances between railyard property line and receiving property measurement locations. The information we do have indicates that receiving property, defined by EPA as residential and commercial land uses, is very often contiguous to railroad property. Also, receiving property is often separated from railroad property by a street or highway. In many situations we note that community land use planning practices have permitted the location of residential development adjacent to railroad yards which in our opinion, shows extremely poor judgment on the part of local planners. Highways and other sources of noise act well to mask the railroad noise. Increased distance between source and receiver also acts to reduce the level of railroad noise reaching receiving property.

3. Question

Is the AAR aware of noise problems associated with rail carrier activities which have served to impede interstate commerce by rail? If so, would you provide us with the state or local political entities involved, the date or dates associated therewith, and whether the problem was resolved or not. Further, we would appreciate your providing us with a list of state or local government actions related to noise which have resulted in railroads having to commit staff or other resources to resolve.

Response

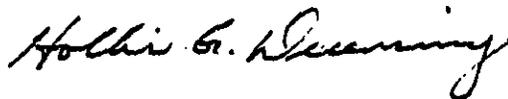
It is clear that the intent of Section 17 is to avoid conflicts with local regulations of noise that are not sensitive to the railroads task of conducting the transportation of goods from one jurisdiction to another. Most, if not all, state and local regulations concerning noise are not based on the ability of the regulated party to achieve the desired level; rather the standards are based on the concept of eliminating "objectionable" or "unnecessary" noise. Without national uniformity of interpretation of noise abatement, the railroads would be faced with unreasonable noise ordinances in each jurisdiction served by a railroad. Given EPA's Quiet Communities Program, complete with Federal encouragement of local noise control, the likelihood of this happening absent Federal preemption is even greater now than when the original Act was passed in 1972. Since the EPA has significantly more contact with State and local authorities and has on several occasions suggested that it is under severe pressure from such sources to take strict measures in the area of railroad noise, it is to be expected that the EPA rather than the AAR would have the most comprehensive file on local laws or ordinances.

CONCLUSION

In conclusion, the AAR respectfully urges the EPA to give full consideration to these comments and the comments submitted by the AAR on July 2, 1979. The proposed property line standards contained in the April 17, 1979, Notice of

Proposed Rulemaking provide for unreasonably low receiving property standards which cannot be met and which are inconsistent with the statutory criteria of Section 17. To implement standards which are not technologically feasible, practical, or cost-effective would unduly interfere with the essential operations of the railroads, would impose a substantial burden on the shipping public, and would do an extreme dis-service to the public welfare in general. The AAR has submitted extensive comments to aid EPA in devising noise regulations consistent with the public interest, and in the coming year would welcome the opportunity to further participate in this proceeding.

Respectfully submitted,



Hollis G. Duensing
Attorney for the
Association of American Railroads

April 4, 1980

CONRAIL



J. B. GREGORY

April 3, 1980

Rail Carrier Docket ONAC 80-01
Standards and Regulations Div. (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. - 20460

Dear Sirs:

The Consolidated Rail Corporation (Conrail) thanks the Environmental Protection Agency (EPA) for the opportunity to submit the attached comments on its April 17, 1979 proposed property line standard for facilities and equipment of interstate rail carriers.

Conrail would be pleased to provide EPA with any additional information concerning these comments. Mr. Jeffrey H. Teitel, Director-Regulatory Affairs at (215) 977-4474 has been assigned to respond to any questions arising from these comments.

Sincerely,

A handwritten signature in dark ink, appearing to read 'J. B. Gregory', written in a cursive style.

J. B. Gregory
Assistant Vice President-Operations

Room 830, Six Penn Center Plaza
Philadelphia, Pa. - 19104

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INTRODUCTION

The Consolidated Rail Corporation ("Conrail"), the Nation's largest freight railroad in terms of tonnage moved and revenue earned, thanks the Environmental Protection Agency ("EPA") once again for the opportunity to comment on its April 17, 1979 Proposed Rules, entitled, "Noise Emission Standards for Transportation Equipment; Interstate Rail Carriers."

Although at first blush, it would appear that Conrail is now in a better position to comment after EPA published its January 4 final noise regulations for point sources, it is in fact more difficult. Conrail may have considered making either additional or different comments if it could have assessed the proposed property line and final point source regulations together. Conrail had to speculate over what final regulations EPA will publish but not without some confusion.

If EPA publishes a property line standard more stringent than the point source property line standard, the point source-property line standards would be meaningless or illusory. Conversely, if EPA publishes a property line standard less stringent than the point source-property line standards, the agency should consider complying with either in the alternative. Perhaps, if EPA promulgates the same property line standards as it did on January 4, at least EPA's regulations will be consistent even

ii.

if it obfuscates the purpose behind this rulemaking.

The information and comments on this proposed rulemaking are divided into three chapters addressing public health and welfare, best available technology and comments on the proposed regulations themselves.

Conrail again stands ready to assist EPA by providing more information to substantiate any statements or explain any issues contained in these comments.

HEALTH AND WELFARE

Section 2(b) of the Noise Control Act of 1972, P.L. 92-547 ("The Act"), states:

"The Congress declares that it is the policy of the United States to promote an environment for all Americans free from noise that jeopardizes their health or welfare."
(Emphasis supplied).

Conrail believes that the U.S. Environmental Protection Agency (EPA) has attempted to promote a more noise-free environment as evidenced by its April 17, "Proposed Noise Emission Standards for Transportation Equipment for Interstate Rail Carriers." Nevertheless, Conrail submits that EPA has not justified or substantiated a relationship between its noise limitations and thresholds affecting health and/or welfare.

The EPA document providing a basis for its proposed regulations, "Background Document for Proposed Revision to Rail Carrier Noise Emission Regulations ("The Document"), fails to provide data to demonstrate railroad noise impact on health and welfare thereby failing to show a basis for its receiving property standard. A reduction in any railroad noise is not an a priori improvement in public health or welfare. Community exposure is irrelevant without data evidencing benefits or detriments. If none had been collected, EPA should have developed some substantive health data so that rational, realistic and relevant

limitations related to the finalized point source standards could have been established.

EPA's opening statements used in both its development documents in the Section entitled, "Health and Welfare," serves to underscore Conrail's initial objections:

"Noise affects people in many ways, although not all noise effects occur at all levels. Rail facility noise may or may not produce the effects mentioned below, depending on exposures and specific situations. The discussion here refers to noise in general. (Emphasis supplied.) "Background Document for Final Interstate Rail Carrier Noise Emission Regulation: Source Standards," EPA 550/9-79-210 (December 1979); "Background Document for Proposed Revision to Rail Carrier Noise Emission Regulation," EPA 550/9-78-207 (February 1979).

EPA has based the need for and value of these proposed regulations on a model which fails to assess accurately the number of people and the extent to which these people are affected. EPA states that public health (and welfare) benefits may be quantified both in terms of reductions in noise exposures and, more meaningfully, in terms of reductions in adverse effects. EPA cited time exposure of railroad noise as a function of the impact on health and welfare but without relevant data involving railroad noise. Conrail submits that the relative benefits and detriments of noise reduction cannot be assessed without more substantive, empirical data.

Although noise interference effects can reportedly be quantified, EPA states that a lack of time and resources precluded such calculations. Instead, EPA offers "predictive analysis" with reference to some photography and census data. Conrail submits that the model described in the Document cannot substitute for quantified information on the impact that point source and non-point source regulations will have on the railroad industry.

EPA's basis for the Proposed Regulations includes averages, groupings, estimates, assumptions, etc. which have led to some very arbitrary noise limitations. EPA's reliance on this modeling technique as a result of limited time and resources should have resulted in some flexibility in assessing the overall impact and interrelationship between ambient and point sources. Perhaps, EPA might have concluded that a simple property line standard would have served everyone's best interest.

EPA in its proposal established a noise measurement indicator stating:

"This indicator correlates well with overall long term effects of noise on the public health and welfare...."
(Background Document, Page 6-5).

The reference that EPA cited for establishing the indicators for estimated day-night average sound levels (L_{dn})

and average equivalent sound levels (L_{eq}) and their relationship to health and welfare is Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," EPA (March 1974). This reference seems less than adequate as a primary resource for developing railroad noise regulations.

This 1974 publication was based on analyses, extrapolations and evaluations of the then-present state of scientific knowledge. On page 7 of the "Forward," it is stated in part:

"Not all of the scientific work that is required for basing such levels of environmental noise (to protect public health and welfare, etc.) on precise objective factors has been completed."

This section states that the reference's use of "health and welfare" applies, "to those levels of noise that have been shown to interfere with the ability to hear...." This reference simply fails to address railroad noise specifically; it also fails to cite a single railroad noise study in its 102 listed references. The limited value of this EPA reference as it applies to the Proposed Railroad Noise Regulation is stated on Page 8:

"The general purpose of this document is rather to discuss environmental noise levels requisite for the protection of public health and welfare without consideration of those elements necessary to an actual rule-making."

Absent detailed health data relating to railroad noise, EPA may have intended to concentrate its protection more broadly on the Nation's welfare. Nevertheless, EPA fails again to present sufficient data or demonstrate which reductions in railroad noises would protect the Nation's welfare.

EPA suggests that the term welfare should include personal comfort arising from disturbances and annoyance. However, annoyance per se is not a legal concept; it merely expresses what amounts to a wide spectrum of individual human response and not the cause. Yet the proposed regulations refer to "annoyance" as a legal threshold concept. The Background Document expressly admits "stress, response cannot be quantified." Page 6-2. The Document speculates on the meaning of "stress response";

"some of this stress response may be reflected in what people express as 'annoyance,' 'irritation,' or 'aggravation.'" Page 6-3.

Irritating and aggravating disturbances are subjective.

Subjective loudness is a function of magnitude or pressure and of frequency; there are different subjective responses to each of the octave bands. EPA's data do not satisfactorily demonstrate the impact of disturbances on the Nation's welfare from railroad noise.

Factually, railroads have been operating in the Northeast more than 125 years, and "discomfort" has not thwarted residential and commercial development near railroad facilities. Nor has EPA cited such as an issue in this development. Even if it did, there still would be no demonstrated basis for imposing both point source and a general property line standards to protect health and welfare.

EPA states in Page 4, in the "Health and Welfare" section of the preamble to the proposed regulations, "The only utility of noise reduction is the protection of health and welfare." Neither the Proposed Regulations nor the Background Document cite or focus on economic data related to railroad noise impact on welfare. EPA's mathematical model for predicted impact from railroad noise is based upon many inaccuracies, omissions and unfounded conclusions. These criticisms are documented in Chapter 4 "Wyle Research Report," WR 79-10, entitled "A Review of the Railroad Yard Noise Standards as Proposed by the U.S. Environmental Protection Agency on April 17, 1979," as submitted by the Association of American Railroads.

EPA's calculations in assessing the cost of compliance with the Proposed Regulations are strictly theoretical. Conrail submits that compliance costs to industry will have a more direct and immediate impact on the Nation's welfare than the impact of noise on adjacent property values. Costs to industry could be ameliorated without jeopardizing public health and welfare by a single property line standard.

EPA should consider the economic impact on many of Conrail's 85,000 plus employees and its thousands of customers if railroads are compelled to spend excessive sums to comply with these Proposed Regulations. DOT's 1978 study 503/901, entitled "A Prospectus for Change in the Freight Railroad Industry," indicates that railroads in the United States have a rate of return of .86% with a projected capital shortfall between now and 1985 of approximately \$13 to \$16 billion. Taxpayers are expected to pay more than \$4 billion to keep trains operating during this period.

The U.S. Government has evidenced a commitment through the passage of the Regulatory Reform and Railroad Revitalization Act of 1976: It has authorized and appropriated substantial amounts of money to support rail service, but insisting that these funds be invested in such a way as to enhance the continuation of the rail industry in the private sector.

The public welfare, if evaluated in light of this commitment alone, would be enhanced by continued rail service. Any new regulations, whether in the noise or any other area, must take into account the impact they may have on the ability of the railroads

to meet the public welfare goals set by the Congress and the Administration. The proposed noise abatement regulations, if implemented, would make it difficult, if not impossible, to achieve those goals.

Section 5(a)(2) of the Act states that the EPA Administrator is required to establish criteria for noise and to "publish information on the levels of environmental noise the attainment and maintenance of which in defined areas under various conditions are requisite to protect the public health and welfare with an adequate margin of safety." (Emphasis supplied).

EPA has not demonstrated empirically that the costs associated with the final point source and proposed receiving property line regulations are commensurate with the alleged benefits. EPA must offer some evidence that the rail operations which they seek to control have adversely affected the public health and welfare.

Conrail urges EPA to reconsider the limitations prescribed in its proposed receiving property line standard. EPA should review available information and develop new empirical, substantive data that is either "requisite to protect the public health and welfare ..." or no stricter than the final point source standards.

Section 556(d) of the Administrative Procedure Act states: "Except as otherwise provided by statute, the proponent of a rule or order has the burden of proof." The Noise Control

Act of 1972, 42 U.S.C. 4901 et seq. states, "The Congress declares that it is the policy of the United States to promote an environment for all Americans free from noise that jeopardizes their health or welfare." EPA has the burden of showing more than a nexus between its proposed standards at receiving properties and the impact of railroad noise on a public health or welfare. EPA must carry this burden in a clear and convincing manner.

Conrail submits that EPA has not demonstrated much more than a slight nexus between noise from railroad yards and impact on health or welfare. EPA states presumptively in the preamble to its April 17, 1979 proposal at page 22963, that its noise descriptor that is used is one that "relates best to protecting the public health and welfare." Furthermore, EPA states on this page "the only utility of noise reduction is the protection of public health and welfare." (Emphasis supplied.)

The protecting health and welfare seems equally obscured by imposing both point source and receiving property line standards on railroads. EPA has promulgated on January 4, 1980, regulations for specific point sources; it will also publish a receiving property standard. Conrail submits that regulations for both point sources and property lines may not be necessary; a property line standard may be sufficient to protect public health and welfare.

The effect of both makes point source standards, particularly, superfluous if not arbitrary and capricious to allegedly protect public health and welfare by ameliorating noise beyond the property line.

Logically, point source and the receiving property line standards should be assessed together. Railroads cannot speculate fairly, accurately or responsibly without understanding more clearly the relationship between the two.

NOISE ABATEMENT TECHNOLOGY

Section 17(a) (1) of the Act states, in part:

"Such proposed regulations shall include noise emission standards setting such limits on noise emissions resulting from operation of the equipment and facilities of surface carriers engaged in interstate commerce by railroad which reflect the degree of noise reduction achievable through the application of the best available technology, taking into account the cost of compliance."
(Emphasis supplied).

Congress in passing the Noise Control Act of 1972 was concerned over the Nation's quality of life, dissatisfied with the functioning of common law and undesirous of a proliferation of local regulation. Congress wanted to protect the Nation's health and welfare by limiting noise through uniform regulation. Congress intended that best available technology (BAT), a dynamic concept, be used as a technology-forcing mechanism. Neither the

Act nor the regulations officially define BAT for railroad noise; EPA was "guided" by a definition in its preamble:

"'Best available technology' is that noise abatement technology or technique available for application to equipment and facilities of surface carriers engaged in interstate commerce by railroad which produces the greatest achievable reduction in the noise produced by such equipment and facilities."

BAT has been described by EPA in other regulatory noise schemes as that technology which is applicable to equipment and performs the greatest noise reductions. Documentation exists that noise BAT is available to reduce aircraft and motor vehicle noise. There appears to be no state of the art to reduce railroad noise. EPA has not satisfactorily documented the existence of BAT for railroad noise reduction.

EPA's mis-characterization and incomplete assessment of BAT were products of its testing methodology. As EPA knows, noise resulting from railroad facilities is a complex mixture of sound which may be generated by many noise sources. As EPA states on page 5-16 of its "Background Document," "f/or a property line standard, available technology requires only that total noise emissions from the operations of all equipment on the property not exceed a specified level at each point along the property line or the adjacent receiving land.

Existing sound monitoring equipment does not - and did not for EPA - distinguish railroad noises from non-railroad yard noises, such as those from adjacent highways and nearby airports. EPA states, on page 5-16 of its "Background Document," "It is realized that yards vary considerably in their configuration and that no yards are 'typical.' Thus, any given yard may have measured property line levels which differ significantly from the estimated property line level for a typical yard." The timing and positioning of EPA's noise monitoring resulted in sharply differing reported noise levels. EPA's absence of demonstration is obvious.

EPA alleges that the BAT cited in its Background Document is "proven technology" for railroad noise. Conrail submits that EPA's assessment of existing BAT is incorrect; the Agency has not clearly established whether the benefits to be gained justify industry's investment in the purported BAT. EPA's required use of BAT on point sources may be enough noise control, as suggested by its techniques for reducing noise in our yards.

EPA identifies Table 5-1 in its "Background Document," as summarizing techniques for reducing noise emissions in railroad yards. Major noise contributors will require some treatment as effective as that which EPA suggests. Conrail contends that once these sources meet EPA's January 4, 1980 limitations, the proposed receiving property line standard may be superfluous. Certainly,

technological problems which railroads experience to control point source emissions may be magnified when attempting to contain sporadic sources at appropriate property lines.

EPA's testing of noise barriers failed to consider the following variables and consequences: EPA tested barriers using different monitoring locations before and after barrier construction; the controlled microphone monitoring positions used by EPA recorded lower sound levels but EPA's reported 20db reduction from the use of barriers did not reflect in their test results the different barrier orientation or angle in relation to the noise source and property line. More measurements at the same and different locations would have revealed the daily noise-fluctuations and provided for more reliable data and valid assessments.

As documented in Sections 1.3 and 5, "Wyle Research Report," WR 79-10, "A Review of the Railroad Yard Noise Standards as Proposed by the U.S. EPA on April 17, 1979," some non-absorptive barriers may serve to channel noise toward their open ends resulting in redistributed noise levels; snow would build up between any kind of a barrier creating a maintenance problem and employees working between barrier walls would be endangered in confined areas by moving trains with limited visibility. Barriers are frequently not physically satisfactory or possible for point source or property line noise control in yards due to inadequate space

and elevation of humps. There are many locations in the Conrail System where barriers would preclude minimum clearance for maintenance and operation. EPA has not assessed the utility, cost and impact of barriers satisfactorily; they should not fall within the category of BAT based upon EPA's narrow findings. EPA should consider offering noise limitation variances where railroads can show that their facilities are fundamentally different due to technological economic infeasibility or physical impossibility.

Conrail submits that EPA has misrepresented various noise abatement equipment as "proven technology." Major engineering issues arise from EPA's proposed yard modifications as follows:

There is insufficient clearance between tracks in most existing yard layouts to accommodate noise barriers. As a result, the fan layout of the yards would require modification. Extensive concrete construction would shut down all or part of the yard if precast concrete sections could not be used. Concrete poured on-site can require from 7 to 28 days to cure to reach its full load-bearing strength.

Additional operational impact attributable to yard modifications not readily quantifiable include:

- Delays in traffic due to rehandling (i.e., multiple switching).
- Increased per diem and transportation costs due to less efficient handling and added train miles (out of route).

- Reduced car utilization.
- Deterioration of service (longer transit times, less available equipment).
- Erosion of traffic and revenues.

The accomplishment of hump yard modification would take at least ten years to accomplish, even under ideal conditions. This assumes that Conrail would proceed at the rate of two classification yards per year; it should be noted, however, that in each case, construction would require from one to three years to complete.

Alternative noise control options such as the shutdown or relocation of locomotives, reduction in operations and land acquisition for buffer zones are often neither possible nor economically feasible.

Conrail will begin shutting down diesel-electric locomotives when not in actual use. However, the industry-wide practice of idling engines will continue to be necessary below 40°F. because only in this way can the diesel engine protect itself from mechanical damage.

A satisfactory engine temperature ensures proper mechanical fit between mating parts and gaskets and provides proper lubrication between moving parts. Water and oil leaks are thereby reduced and the potential for damage through cold start-up is minimized.

When a diesel engine is permitted to cool during a prolonged shut down period, i.e., below 40°F., the metal parts contract and water can leak into the combustion chamber (cylinder) and on top of the pistons. When the engine is restarted, the water on top of a piston cannot be compressed and serious mechanical damage results, usually a broken connecting rod, piston cylinder liner, or any combination thereof. Additionally, after prolonged shut-down (8 hours or more), the lubricating oil will drain from the bearing surfaces and into the sump (crankcase). When 40 weight lubricating oil becomes cold it will not flow readily when the engine is restarted. Therefore, moving parts incur extraordinary wear and possible damage when a diesel engine is restarted cold after a shut down.

In temperatures below 40°F., a shut down locomotive must be protected from freeze damage to its water-activated cooling system. Generally, this protection must be provided from October through April in Conrail's operating territory. Anti-freeze solution in the cooling system is not feasible because of the danger to moving parts if the coolant should leak into the lubricating oil. Anti-freeze can cause damage to bearing surfaces and serious mechanical failure.

Another compelling reason for keeping diesel engines running and at operating temperature is the fact that at relatively low temperatures, it is virtually impossible to start a diesel engine using the locomotive starting batteries.

This phenomenon results from the viscosity of the cold lubricating oil, reduced lubrication on bearing surfaces, reduced efficiency of starting batteries at low temperatures, and the inability to achieve firing temperature in the combustion chamber through compression. The use of ether to assist in starting diesel engines is hazardous to both employees and equipment and is expressly prohibited by Conrail policy.

Relocation of locomotives and a change in operations would require more track, land, locomotives, crews, fuel and supervision. Railroad operations and concomitant maintenance activities are continuous and do not decrease with the onset of night. Similarly, traffic patterns are continuously changing. Locomotive relocation or operation curtailment during the night is less feasible and practical for railroads than for trucks and planes, since the continuous rail traffic is confined to movement on available and unblocked rails. These suggested noise abatement alternatives are not tantamount to BAT and clearly indicate EPA's failure to understand the logistics and timing of railroad operations.

EPA should reexamine the technology it has cited as BAT, perform demonstrations where appropriate, consider existing BAT performance records and reassess the technological and economic impacts in the context of actual operating practices and overlapping regulations. EPA should consider a variance where it is technologically not feasible to apply BAT. Finally, EPA should

offer its technical findings to the railroad industry for its comment since this is where resides the greatest expertise.

STANDARDS

Subpart A (Definitions) of EPA's April 17, 1979
Proposed Standards

There is no definition for "best available technology." (BAT). Nor has such a definition been offered by EPA in its January 4, 1980 noise standards. The following definition is offered by Conrail:

"Best available technology means the best proven technology currently known and available in the railroad industry."

The following letters refer to respectively lettered sections in Subpart A:

- (n) There should be no provision for a day-night distinction as comments suggest below.
- (r) "Component sounds" definition is without value unless, technologically, there is sufficient integrity in monitoring equipment to distinguish the "through train" from operating equipment.
- (s) Same comment as above in (r) but distinction made would be between railroad and non-railroad noise sources.
- (u) Same comment as in (n): This definition, like the standard itself is arbitrary, capricious and

discriminatory by virtue of its intended application.

(ee) Same comment as in (u).

(gg) Same comment as in (u).

(hh) Same comment as in (u).

Subpart B of April 17, 1979 Proposal (Interstate Rail Carrier Operations Standards).

Section 201.10 (b). This receiving property standard discriminates in favor of Western railroads; the Northeast has little undeveloped land by EPA's definition. Moreover, EPA's January 4, 1980 definition of "receiving property" is broad and buttresses this argument. As EPA states in its February 1979 "Background Document," pages J-4 and J-5,

"Conrail has a large number of railroad yards, many of which are in areas of high population density... About 30 percent of the nation's total yard operations are being carried out by Conrail."

Also, the Northeast offers much less of an opportunity to purchase additional land around yards to serve as buffer zones.

EPA has identified some seventeen pieces of maintenance of way equipment. EPA has identified and regulated noise levels coming from four of these individual pieces of equipment. EPA has stated on the one hand that it is not establishing a specific

aggregate noise limit on yard equipment; yet on the other hand it imposes this standard which would not distinguish among all noise sources. EPA's January 4, 1980 final regulations for four point sources do not regulate maintenance-of-way equipment. Conrail submits that either the January 4 regulations or the proposed property line standards are sufficient to protect public health and welfare.

Alternatively, EPA should offer a range of noise limitations to account for non-railroad noise contributions or at least, offer a variance procedure whereby petitioners can make a showing on a case-by-case basis of non-railroad noise contributions.

Alternatively, EPA should consider compliance with the January 4 Joint Source Standards to be compliance with the receiving property line standard.

EPA should also consider providing for a procedure allowing a variance from the receiving property standard. The variance should be based upon petitioner's technological or economic showing of fundamentally different factors impeding the use of BAT. As stated by EPA on Page J-4 of its February 1979 "Background Document," "Because of its size and location, the expense of a noise regulation can be expected to fall heavily on Conrail."

Section 201.17. The imposition of a day-night standard for railroads would restrict all rail operations. Compliance with the night time limit would effectively disrupt Conrail's activities at many flat switching and industrial train yards. These disruptions would in many cases result in operational delays and prevent Conrail from establishing itself as a reliable carrier.

Additionally, the nightly shutdown and morning startup of diesel locomotives without consideration of temperatures would damage many engines: Contraction of the piston casing caused by cooling would permit water to enter the cylinders.

EPA has not documented a need for the more restrictive L_{dn} standard of 10 db intended to ameliorate the intrusive impact of noise. The alleged interruption of sleep of residents living adjacent to railroad facilities serving, in part, as a reason for the L_{dn} regulations, is an arbitrary and spurious premise. The unfounded assumption of railroad-caused insomnia should not be the rationale for using the L_{eg} (1) or L_{dn} requirements. EPA has not correlated the added 10db restriction at night with health; this day-night restriction offers no substantial gain to the Nation's welfare.

The L_{dn} standard is highly discriminatory. There is no L_{dn} standard being imposed on any other mode of transportation. EPA has not carefully considered costs relating to loss of business and jobs or the additional cars needed for the daytime car cycle. During 1978, for example, Conrail moved over 4.95 million carloads and trailers containing perishables and non-perishables; the vast majority of this freight must meet a schedule requiring daily movement over a 24-hour period. If hump yards close down from 11:00 PM until 7:00 AM, Conrail predicts that within one week's

time, disruptions caused by physical obstruction would result in a regional system shutdown. It clearly is safe to say that there would be no service at all or decreased service and increased costs arising from a more stringent nighttime standard. These impacts have been grossly understated or overlooked by EPA.

EPA's casual reference to curtailment of night time activities cannot be dismissed without pointing to a number of serious business and operational implications, both within and without the rail industry, including:

- Less efficient utilization of fixed plant and equipment, which would translate into operating problems, competitive disadvantages, etc.; operating and service deterioration would quickly lead to a diversion of traffic and revenue to other modes.
- Disruptive effect of not providing continuous support to heavy industry that operates on an around-the-clock basis. In addition to its impact on the rail industry, such restrictions would also result in less efficient utilization of industrial facilities, with a resultant rippling effect throughout the economy.

Inability to provide early morning staging activity in support of daytime operations. This would seriously impair Conrail's ability to meet service commitments, e.g. intermodal loadings and service to major eastern perishable markets.

Decreased service arising from a more restrictive nighttime standard is contrary to Congressional intent. Congress expressed its "policy" in Section 2(b) of the Act, but it expressed specific intent when it set aside funds for Conrail to assist it in increasing revenues from rail service.

These regulations should technically and legally distinguish railroad from non-railroad noise sources. The EPA proposal, for example, fails to provide for non-railroad noises audible in and around yards, viz: overhead aircraft, adjacent highways, scrap yards, foundries, forges, construction, trash compacting trucks, and subway or elevated trains may add to railroad yard noises. Wheels squeal around curves; cars rattle as they adjust to the slack; dynamic brake systems whine as they are applied to multiple unit locomotive consists; and longer trains beat out a familiar click as they pass over frogs and joints. The receiving property standard also fails to distinguish noise from 24 hour operations at factories, mills, mines and waterfronts.

Again, EPA should provide procedurally for a railroad to petition EPA for a variance from this standard where it can show economic or technological infeasibility, physical impossibility or no exposed population.

Subpart C (Measurement Criteria for Specific Noise Sources) of the April 17, 1979 Proposal.

As a general comment, Conrail submits that EPA's measurement criteria does not account for a wide variety of combined effects. Instrument accuracy tolerances, reflecting noise off of objects near the source, competing noise sources, ground surface contours and various weather conditions have an effect on noise measurement accuracy. Conrail believes that EPA should consider these contingencies in their measurement methodology.

Subpart D (Measurement Criteria for Receiving Property) of the April 17, 1979 Proposal.

EPA's measurement methodology in this subpart fails to consider that noise dominance can change hourly; there is no commonality of railroad sites as a consequence of variations in property lines and yard activities; and noise measurements do not always record the noise from an identifiable source.

As mentioned earlier, there are several non-railroad noise sources which contribute to the receiving property noise

levels. Measurement methodology must ensure monitoring of railroad noise exclusively; this standard fails to the extent that non-railroad noises may be recorded by monitoring equipment. Monitoring equipment should be positioned some distance from any background object which is likely to reflect and register both the direct and reflected sound waves.

April 1, 1980

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regulations are significant unless they meet any of five special criteria set forth in "Improving Environmental Regulations, Final Report Implementing Executive Order 12044," 44 FR 30988 (May 29, 1979). (None of these criteria apply to this action.) Furthermore, the Agency classifies each regulation as either "major," "routine," or "unclassified." Major regulations are those that have substantial impact on health, ecology, the economy, particular communities or regions, and the activities of federal and state agencies.

In EPA's most recent regulatory agenda dated March 14, 1980 (45 FR 16832), the Agency classifies the Interstate Rail Carrier Noise Standards Revision--Property Line Standard as a major regulation and indicates that a regulatory analysis is planned to be performed. Yet in a notice in the Federal Register to reopen the docket on this regulation dated January 4, 1980 (45 FR 1263), the Agency lists this regulation as a "significant routine" regulation and states explicitly that a regulatory analysis is not required. Furthermore, in April, 1979 when the property line standard was first proposed, EPA classified the regulation as "not significant." Thus this railyard property line noise standard has gone from "not significant" to "significant routine" to "major significant," and the Agency has twice said a regulatory analysis is not required in proposals dated April, 1979 and January, 1980, yet reverses itself in its present regulatory calendar dated March 14, 1980 stating explicitly that a regulatory analysis is being performed.

NLC is pleased to see the upgrading of this proposed regulation to "major significant" and is pleased to see that a regulatory analysis pursuant to Executive Order 12044 is in the making. However, due to the "about face" on this issue between January and March of this year we are not completely certain that a regulatory analysis is, in fact, underway. NLC requests that formal notice of the action be published separately in the Federal Register so that all interested parties may participate.

If a regulatory analysis is not being prepared, NLC would like to offer the following reasons why it is necessary. Under Section 3 of Executive Order 12044 entitled "Regulatory Analysis" it is stated that regulations identified as significant may have major economic consequences for industries, regions, or levels of government and require a regulatory analysis. The minimum criteria for a regulatory analysis as stated in this Executive Order is a \$100 million or more impact on the economy. The national railyard property line standard meets this criteria according to cost estimates given in the Federal Register on Friday, January 4, 1980

April 1, 1980

-3-

(45 FR 1261 Table 5.1). Capital costs for rail carriers alone were calculated to be \$110 million, a full \$10 million above the President's minimum requirements for a regulatory analysis. Costs to local government were not even mentioned, but nonetheless would represent a sizable addition to this sum. It is worth mentioning that in this same Federal Register notice, EPA stated that a regulatory analysis was not required. It is very clear that it is required and the National League of Cities formally requests that it be done.

Such an analysis should include full documentation of the entire EPA decisionmaking process for this regulation including alternative approaches considered early on; an analysis of the economic consequences of each of these alternatives; a detailed explanation for choosing one alternative over another; and complete documentation of all public participation. Furthermore, as required by Executive Order 12044, a regulatory analysis must be developed with public comment opportunities and must not be finalized prior to outside comment.

Improving Government Regulations Having Major Intergovernmental Significance (Memorandum from the President dated March 23, 1978 to Heads of Executive Departments and Agencies)

As part of the President's Regulatory Reform Initiatives, new procedures to "assure full state and local participation in the development and promulgation of federal regulations with significant intergovernmental impact" were established. These procedures specifically state that organizations representing general purpose state and local governments may notify an agency if a regulation included on an agency regulatory agenda is apt to have major intergovernmental significance. Upon such notification, according to the order, the agency shall develop a specific plan for consultation with state and local government in the development of that regulation. Such consultation places an "affirmative obligation" on the Agency to "actively seek out, encourage, and facilitate the submission of state and local comments."

This railyard noise regulation is of major intergovernmental significance and we have notified Mr. Alan Magazine, Director of EPA's Intergovernmental Relations Office, to that effect. A copy of our request submitted to Mr. Magazine is attached to these comments. NLC believes that cities have not been "affirmatively" consulted by EPA on the proposed railyard property line noise standard. The only notification has been in a passive form limited to a direct mail solicitation for comments to select local government bodies. No public hearings have been held and no formal state and local consultation meetings have been convened to the best of our knowledge. NLC requests that public hearings be held and that EPA meet its obligations outlined in the Presidential memoranda cited above.

April 1, 1980

-4-

II. Urban and Community Impact Analyses (UCIA)
Executive Order 12074 dated August 16, 1978

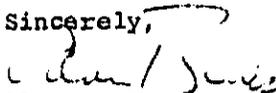
The National League of Cities firmly believes that the proposed EPA national property line noise standards for fixed rail facilities are of major intergovernmental significance and will have an adverse impact on local governments. EPA has itself stated in press releases and regulatory background information that local governments will be thoroughly pre-empted from doing anything to control railyard noise if such noise is within federal "average" noise guidelines. In many cases this "average" guideline will allow for significant increases in noise up to the allowable federal maximum. The average standard itself is so permissive that railyard noise at this level will not be unlike the local noise environs of a city situated next to a major airport.

The National League of Cities has informed the Office of Management and Budget (OMB) that EPA's proposed national property line noise standard for fixed rail facilities will adversely impact cities, and has requested that a Urban and Community Impact Analysis be performed according to the procedures outlined in Executive Order 12074 and OMB Circular No. A-116, "Agency Preparation of Urban and Community Impact Analyses," implementing that Order. The circular explicitly states that agencies are to subject major regulatory initiatives to Urban Community Impact Analyses if these regulations require an economic analyses under Executive Order 12044. EPA has determined that the railyard noise regulation is subject to an economic analysis pursuant to Executive Order 12044 as stated in "Supplementary Information, Part 10.0, Regulatory Analysis" published in the Federal Register, Vol. 45, No. 3, on January 4, 1980. Clearly EPA is obligated and required to prepare an Urban and Community Impact Analysis for this regulation. The National League of Cities requests further that EPA continuously consult with NLC before and during the preparation of this impact statement. A copy of the NLC request to James McIntyre, Director of OMB, that this regulation be identified as a major urban regulatory initiative requiring an Urban and Community Impact Analysis is attached.

On behalf of our 15,000 members NLC appreciates this opportunity to comment once again and looks forward to EPA's timely response to our requests.

Please contact Lloyd Chaisson of my staff at (202) 293-7174 regarding these comments.

Sincerely,


Alan Beals
Executive Director

- 108 -



National League of Cities
 1620 Eye Street, N.W.
 Washington, D. C. 20006
 (202) 293-7310
 Cable: NLCITIES

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 Mayor, Savannah, Georgia
 Executive Director
 Alan Beals

April 1, 1980

Mr. James T. McIntyre, Jr.
 Director
 Office of Management and Budget
 Executive Office Building
 Washington, D.C. 20503

Dear Mr. McIntyre:

The Environmental Protection Agency (EPA) is proposing a regulation setting national property line noise emission standards for fixed rail facilities. This regulation is being promulgated under Section 17 of the Noise Control Act of 1972. The regulation will totally prevent cities from controlling excessive railyard noise, and by EPA's own admission will protect rail carriers at the expense of cities. NLC sees this federal policy as unreasonable and as having a severely adverse impact on cities with significant urban rail noise problems.

Executive Order 12074, Urban and Community Impact Analyses (UCIA), issued by the President on August 16, 1978 establishes a procedure for identifying aspects of proposed federal policies adversely impacting cities. Clearly, this regulation will adversely impact many cities throughout the country and represents a major EPA policy initiative fulfilling all UCIA requirements spelled out in OMB Circular No. A-116 implementing Executive Order 12074. As such, the National League of Cities formally requests that the Office of Management and Budget identify EPA's national property line railyard noise standard (40 CFR 201) as a major policy initiative warranting the preparation of an Urban and Community Impact Analysis, and that such analysis be prepared by EPA in mandatory consultation with state and local government.

A copy of NLC's comments on the proposed EPA railyard regulation is enclosed for your information. Lloyd Chaisson of my staff is handling matters pertaining to this request. He may be contacted at (202) 293-7174.

I look forward to your early response.

Sincerely,

 Alan Beals
 Executive Director

PAST PRESIDENTS: Tom Bradley, Mayor, Los Angeles, California; Henry W. Sells, Mayor, Madison, Wisconsin; Tom Meany, Mayor, Columbus, Ohio; DIRECTORS: R. Mitchell Anaya, Council Director, Miami Municipal League; Patrick A. Beas, Council Director, Albuquerque, New Mexico; Stephen C. Beas, Executive Director, City of Detroit, Michigan; Robert F. Beas, Mayor, Little Rock, Arkansas; Kenneth G. Buehler, Council Director, Colorado Municipal League; Henry G. Chisness, Council Member, San Antonio, Texas; Charles E. Clark, Mayor, Detroit, Michigan; Thomas J. Clark, Mayor, Long Beach, California; William D. Conroy, Mayor, Arlington Heights, Illinois; Charles H. DeLoach, Director, Washington, D.C.; Patrick A. Duhan, Executive Director, Midwest Municipal Association; Stanley E. Eddy, Mayor, Memphis, Tennessee; Carl F. Langford, Mayor, Chicago, Illinois; Ronald P. Lantz, Commissioner, Los Angeles, California; Jim McCann, Mayor, Madison, Tennessee; Ruth W. Manning, Council Member, New York City; Robert H. Mankin, Mayor, New Orleans, Louisiana; James M. Pennington, Director, National Municipal League; Kenneth P. Ryan, Executive Director, North Carolina League of Cities; James H. Smith, Mayor, New York City; Joseph P. Riley, Mayor, Charleston, South Carolina; Patrick Walsh, Commissioner, Dayton, Ohio; Charles W. Wertz, Mayor, Seattle, Washington; James T. Ryan, Mayor, Arlington Heights, Illinois; William F. Sweeney, Council Member, Kansas City, Missouri; Fred Tynaga, Mayor, New York State; Donald Van Horn, Council Member, Jefferson, Missouri; John P. Williams, Executive Director, American League of Cities; Ross W. Wilson, Mayor, Houston, Texas; Ted Wilson, Mayor, Salt Lake City, Utah.



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 Executive Director
 Alan Brink

July 2, 1979

Mr. Charles Elkins, Deputy Assistant Administrator
 Office of Noise Abatement and Control (AW-471)
 U.S. Environmental Protection Agency
 Washington, DC 20460

Ref: Rail Carrier Docket (ONAC 79-01)

Dear Mr. Elkins:

The National League of Cities (NLC) finds the Environmental Protection Agency's (EPA) proposed noise emission standards for railroad facilities and equipment wholly inadequate from both technical and policy perspectives. We object to the concept of absolute inflexible federal regulation of fixed facilities within a local jurisdiction and find such federal policy without precedent. Within the legislative parameters to control railyard noise, EPA has opted for a very unreasonable course of action, unreasonable for cities and unreasonable for the rail industry.

Specifically, the regulation fails to conform with the following articulated federal policies:

- The President's Urban Policy
- EPA's National Strategy for Noise Control
- Protection of public health and welfare (Section 2(a), Noise Control Act of 1972, as amended)

Additionally the regulation as proposed fails to address the following important local concerns:

- Reasonable balance between community and industry concerns
- Recognition of special local conditions necessitating special control measures.
- The unique, localized nature of noise pollution

President Carter, in announcing the Administration's commitment to urban America called upon each department and agency to recognize local initiative

1978 PRESIDENT: Tom Bradley, Mayor, Los Angeles, California; Henry W. Meier, Mayor, Dallas, Texas; DIRECTORS: R. Michael Angelo, Executive Director, Kentucky Municipal League; Patrick J. Bell, Executive Director, American League of Cities; Kenneth R. Bowen, Mayor, Lafayette, Louisiana; Richard Brown, Executive Director, Texas Municipal League; Kenneth G. Buech, Executive Director, Colorado Municipal League; Douglas B. Dunlop, Council Member, D. J. King, Virginia; Richard E. Carbone, Mayor, New York; Howard Connors, Mayor, Richmond, Virginia; Robert B. Corbin, Mayor, Memphis, Tennessee; Henry G. Glavin, City Manager, Sacramento, California; Arlington D. Green, Council Chairman, Washington, D.C.; Patrick A. Dunn, Executive Director, Mississippi Municipal League; Margaret T. Harbo, Mayor, Phoenix, Arizona; Bruce Henderson, Council President, Denver, Colorado; Charles P. Horn, Mayor, Berkeley, California; Raymond Jackson, Mayor, Austin, Texas; Carl T. Langford, Mayor, Concord, California; Richard L. Lanning, Mayor, Duluth, Georgia; Joseph M. Kutz, Mayor, Newport News, Virginia; John M. Parham, Executive Director, National League of Cities; Cathy Reynolds, Council Member, Denver, Colorado; Joseph B. Riley, Jr., Mayor, Charleston, South Carolina; Richard H. Sisk, Mayor, Littleton, Colorado; Kenneth S. Shuler, Executive Director, Massachusetts League of Cities and Towns; Ron E. Soltau, Executive Director, Association of Washington Cities; Walter P. Sapping, Council Member, North St. Louis; Dorothy Van Horn, Council Member, Jackson, Mississippi; David J. Van Vleet, Mayor, Birmingham, Alabama; Joel Wachs, Council Member, Los Angeles, California; Ross Wessels, Mayor, Hayward, California; Ted Whelan, Mayor, San Jose, California.

and leadership in all federal programs and regulations which impact local government. EPA's proposed railyard regulation does not reflect this directive, since it eliminates all local initiatives to reduce railyard facility noise. It provides for a single-number uniform national standard which fails to recognize the complexity of combating individual fixed facility noise levels. (NLC, however, does recommend that all source standards be retained for "rolling stock," i.e. refrigerator cars, locomotives, etc.)

The proposed railyard regulation establishes a standard which conflicts with articulated EPA noise control policy in two ways:

- (1) It fails to "reduce environmental noise exposure to Ldn 65 dB by vigorous regulatory and planning actions" (Toward a National Strategy for Noise Control, Environmental Protection Agency, April 1977)
- (2) It fails to "strive for an eventual reduction of noise levels to an Ldn of 55dB" (Ibid)

Furthermore, the enforcement measures set forth are unworkable; they rely on measurements of 1 hour or more. This approach is impossible from a local cost and a local enforcement standpoint.

NLC views this regulation as excluding local participation even more than federal airport noise policies. At the very least, local governments can be consulted in preparing an airport noise abatement plan, but not so in the federal regulation regarding railyard facilities. Since EPA strongly advocates such cooperative airport noise abatement planning, NLC finds such a dramatic reversal of previously articulated policy alarming.

We urge EPA to eliminate the use of property-line standards as the basis for regulating railroad noise emissions. EPA is ignoring other possibilities. In the case of Association of American Railroads et. al. vs. Costle the Court stated, "if the federal level issues all of its regulations concerning 'equipment and facilities' at one time, the localities can plan their own activities in the area of noise regulation with increased certainty and confidence that their efforts will not go for naught." Clearly this statement embraces the idea that cities can play a role, within federal parameters, in controlling railyard noise. The property-line standard is contrary to the Court's acceptance of local initiatives within federal preemptive guidelines. This concept together with the lack of a definition of "noise emission standards" in Section 17(a) leaves EPA considerable regulatory latitude, more than it has opted to exercise.

Within the context of Section 17 of the Noise Control Act of 1972, NLC believes that the intent of Congress was to provide a uniform set of regulations which do not burden the railroad industry. NLC supports regulatory action which would accommodate the rail industry concerns but which will also provide a high degree of local planning and initiative.

NLC PROPOSAL

In lieu of the proposed property line standards, NLC supports a package of uniform local options to control railyard noise which could be activated by any community seeking relief from rail noise; if the local government sees no necessity for railyard noise reduction, then none would be required. The benefit of such an approach, as opposed to EPA's proposal, is that it does not mandate the rail industry to reduce noise at every rail facility in the country whether or not such reduction is necessary to protect public health. Under our proposal, a community, experiencing railyard noise problems, would have several federally prescribed options which it could consider in developing and implementing an abatement plan. Abatement requirements would become mandatory upon a local railyard operator only if a city, with approval of EPA, decided that they were necessary. In effect, the city and the railroad would consult with one another and develop an abatement plan based on prescribed federal options such as modified curfews, barriers, speed limits, operations, etc. Only action by municipal government would result in abatement requirements being placed upon the local railyard operator. An option package would allow the rail industry to target its noise abatement resources on "problem" yards rather than scattering investments at every yard in the country. In return for such targeting, lower noise levels than those proposed by the regulation could and should be achieved in heavily noise impacted urban areas. NLC anticipates that a regulatory approach of this nature would cost the rail industry considerably less money and allow it to invest its noise abatement resources where they would provide the most noise relief to citizens. Such a city-industry plan of action is currently being implemented by the city of Dover, Delaware and Con Rail in solving an acute railyard noise problem in that city. NLC supports such a balance of concerns in controlling yard noise and urges EPA to issue a standard which sets forth equitable local options for control within certain uniform parameters.

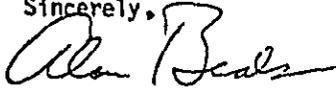
We feel that such an approach is both reasonable to cities and the rail industry and will save significant time and money. NLC believes that such city-industry cooperation must be encouraged by regulations, not eliminated. This approach is not unlike that currently available to cities seeking relief from noise generated by an airport, a fixed facility also. Furthermore such an "optional" regulatory proposal conforms with current moves to deregulate the rail industry.

While we recognize the legal restraints which have been imposed on EPA to issue regulations expeditiously under the federal noise law, NLC feels that because of the controversy about these regulations an extension of the promulgation deadline would allow adequate time to develop a meaningful and balanced noise abatement strategy. Extensive public hearings should be conducted which would lead to a more reasonable regulation rather than one which removes noise control from the hands of local government.

We recognize that the existing law preempts state and local governments from establishing noise emission levels in conflict with federal limits. But we do not believe that Section 17 precludes EPA from establishing several uniform options which local governments can choose among subject to EPA approval. EPA's approval of a local government's abatement plan would be contingent on protecting public health and welfare and on "taking into account the cost of compliance" by railroads.

The National League of Cities appreciates this opportunity to comment on the proposed regulation and would be happy to meet with representatives of the rail industry and EPA to develop a fair solution to the rail noise problem within the existing parameters of The Noise Control Act of 1972.

Sincerely,



Alan Beals
Executive Director

Enclosure

cc: Senator John C. Culver
Senator William V. Roth
Representative James Florio
Jack Watson
Stuart Eizenstat

Action 201.12 and
201.30-201.33
Comments Received
USEPA Region IV
Office
March 26, 1980

Mr. Dennis E. Wile
U.S. Environmental
Protection Agency,
345 Courtland Street, N.E.
Atlanta, Georgia. 30308

Dear Mr. Wile:

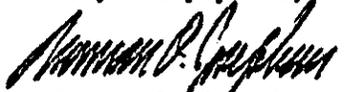
I wish to share with your office my recently published viewpoint on NOISE POLLUTION in Palm Beach County, Florida. (See atchd.)

The purpose of this statement was not alone to express a personal sense of pique, but rather to give expression to a widespread problem affecting the lives of many people on the east coast of Florida.

Anything that your office can do to support the right of County governments to retain their right to control noise, speed and hours of rail-road operation will be gratefully received by the thousands of citizens now so adversely effected.

All of us greatly appreciate your efforts in our behalf.

Very truly yours,


Norman O. Josephsen
2508 - 10th Ave. No.
Lake Worth, Florida.
33461

Whistle Blowing

Noise pollution is no joke. The worst local example of this proven detriment to human health and well-being is the FEC and SCL Railroads whose locomotives and cars ride roughshod over human sensibilities during the evening, night and early morning hours with an unholy howling and clatter that night after night disturbs the much-needed rest of hard working people.

It is time for Palm Beach County citizens to make known their indignation at this environmental degradation and demand a ban on the banshees that so directly undermine the quality of our lives.

4-21-80

N.O. Josephsen
Lake Worth

REC'D 4-21-80

8 APR 26 7: 04



PROJECT WHISTLE STOP, FLORIDA, U.S.A., Inc.

SAUL S. LEVY - President - 2999 Point East Drive, N. Miami Beach, Fl. 33180 - 932-9324
A. JOSEPH PLATNICK - Treasurer - 18071 Biscayne Blvd, N. Miami Bch, Fl. 33160 - 932-1010



April 2, '80

Rail Carrier Docket
ONAC 80-01
Standards and Regulations Division (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Sirs:

We should like to make comments on Sections 201.12 and 201.30-201.33.

The noise made by trains as they cross roads is sometimes unbearable due to the horn-blowing by the engineers. Some engineers act differently than others, and some horns are of different volume than others.

Needed looking into would be the 1. The various loudness of the different horns. It seems that different trains have horns which emit different loudness of sound.
2. The engineers vary their use of the horn in length of sound. Some engineers will tap their horns lightly, and a few minutes later, another train engineer will hold his hand down on the horn and make one long blast instead of four short ones.
3. The need of four blasts of the horn is silly. This is a means of warning. Why does the engineer have to blow the horn as he passes through the intersection? Once the train reached the distance of not being able to stop for someone in his path, isn't it ridiculous to continue blowing his horn? Two short blasts should be more than sufficient if done at the proper distance from the intersection.
4. The need of horn blowing at all. It seems that horn blowing makes an entire community aware that a train is passing an intersection or is doing some work in a yard. Only those people interested in crossing the intersection, or are involved in the yard, should be warned through the use of devices which would be more localized, such as bells, or WalkieTalkies.

Thank you for your consideration of our comments.

Sincerely,

A. Joseph Platnick
A. Joseph Platnick

RECEIVED

APR 11 1980



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
EDWARD TATNALL BUILDING
DOVER, DELAWARE 19901

OFFICE OF THE
SECRETARY

PHONE: (302) 678-4403

April 3, 1980

Rail Carrier Docket Number ONAC 80-01
Standards and Regulations Division (ANR-490)
U. S. Environmental Protection Agency
Washington, D. C. 20460

Gentlemen:

The State of Delaware Department of Natural Resources and Environmental Control requests that the following comments be considered in the promulgation of receiving railyard property line noise emission standards pursuant to the notice in the federal register of January 4, 1980.

Our comments of May 29, 1979, apply equally to the promulgation of this standard and we request that the enclosed copy of those comments be considered in your current deliberations.

The following portions of the proposed regulation are of particular concern:

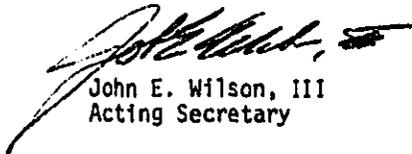
- (1) Property Line vs Receiving Property Standard: The standards proposed on April 17, 1979, are designated as "Receiving Property Standards," but the federal register dated January 4, 1980, proposes a "property line" standard. It is essential that you clarify precisely where the standard is to apply.
- (2) Proposed Standards: Assuming the proposed standards are applicable to receiving properties, we again reiterate our concern that the standards will legally permit levels of noise which will adversely impact several million people throughout the country. Further, the proposal provides no expectation that a day-night sound level of 55 dBA will ever be achieved.
- (3) Economic Impact on Railroad Industry: Section 17 of the Noise Control Act of 1972 clearly places emphasis on matters of costs imposed on the industry. EPA reports that it "foresees no significant economic impact in the industry overall" resulting from the cost of applying available technology to meet the proposed regulations. We believe, therefore, that it is reasonable to expect any industry to accept some economic burden in an effort to alleviate adverse environmental conditions, by which it is responsible. It appears that the proposed standards could

be made more stringent to obtain greater protection of public health and welfare without undue economic burden to the railroad industry.

- (4) Effective Date: The specific railroad noise source standards promulgated on January 4, 1980, require compliance by January 15, 1984. The proposed regulation would require "All Facilities & Equipment" to comply by January 1, 1982. We urge you to retain this earlier compliance date for these facilities to achieve a measure of relief from railroad noise levels at the earliest practicable date.
- (5) Preemption and Enforcement: We wish to emphasize our earlier comments on these subjects which question whether the public will accrue any benefit from the proposed regulations because of the limited enforcement resources of the Federal Railroad Administration and the preemptive nature of the federal regulation. As a minimum, the regulations should specify rules and procedures which would allow State and local governments to apply for waivers of exemption to permit them to deal effectively with local conditions.

We urge you to give further consideration to amending the proposal in a manner which will provide a greater measure of protection to the public health and welfare and afford State and local agencies the opportunity to resolve their individual problems.

Very truly yours,



John E. Wilson, III
Acting Secretary

JEW:RRF:KK
cc: Mr. John Mogan, City Manager, Dover
Mr. Eugene Ruane
Enclosure



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
EDWARD TATNALL BUILDING
DOVER, DELAWARE 19901

OFFICE OF THE
SECRETARY

PHONE: (302) 678-4403

May 29, 1979

Rail Carrier Docket Number ONAC 79-01
Office of Noise Abatement and Control (ANR-490)
U. S. Environmental Protection Agency
Washington, D. C. 20460

Gentlemen:

The State of Delaware Department of Natural Resources and Environmental Control requests that the following comments be considered in the promulgation of rail carrier noise emission standards pursuant to the notice in the federal register of April 17, 1979.

The proposed regulations, in our opinion, will be virtually ineffective toward resolving the noise problems associated with the complex and pervasive railroad industry. They are not protective of public health and welfare; they are inconsistent with the national noise policy; they are totally preemptive and; they are unenforceable. It is gratifying, however, to note that by making the proposed standards applicable at all receiving property, the regulatory approach is, in this respect, consistent with the Levels Document (EPA 550/9-74-004, March, 1974).

It is evident that the proposed regulations attempt to follow the mandate of Section 17(a)(1) of the Noise Control Act of 1972 ("the Act") requiring regulations "which reflect the degree of noise reduction achievable through the application of the best available technology, taking into account the cost of compliance." It is unconscionable, however, to believe, as reportedly stated by the American Association of Railroads (AAR), that the intent of Congress was to protect the railroads and interstate commerce and that any concern the Congress may have had over the impact of railroad noise upon the health and welfare of the American public was secondary at best. Indeed, this is contrary to the findings of Congress expressed in Section 2(a) of the Act: "(1) that inadequately controlled noise presents a growing danger to the health and welfare of the Nation's population, particularly in urban areas; (2) that the major sources of noise include transportation vehicles and equipment, machinery, appliances, and other products in commerce." In Section 2(b), "The Congress declares that it is the policy of the United States to promote an environment for all Americans free from noise that jeopardizes their health or welfare." The sound level measurements reported in the Background Document make it abundantly clear that railroad noises substantially impact public health and welfare. This data notwithstanding, the AAR reportedly has issued

Office of Noise Abatement and Control

May 29, 1979

Page Two

statements to the effect that there is no available evidence that a health and welfare problem exists and, hence, there is no justification for crippling the nation's rail network through imposition of a standard penalizing night-time operations or requiring the expenditure of hundreds of million of dollars for noise control. This Department does not advocate crippling the railroad industry, but, as in most efforts to protect health and welfare, an expenditure is required which must be factored into the cost of doing business. Certainly, this cost must be considered in the development of regulations, but the regulations can be structured in a manner which will allow the industry to absorb these costs over a period of time. But, there can be no doubt about the fact that the corrective actions will be costly, but cost per se should not forever preclude the public from the healthy environment to which it is entitled.

Clearly, as EPA acknowledges, "The Agency has been extremely sensitive to costs and potential effects on railroad operations in setting its standards." Apparently, as evidenced by AAR statements, the industry considers public health and welfare secondary to its own interests.

The limited concern over public health and welfare is further evidenced by the fact that in a Background Document measuring 1-1/8 inches in thickness, EPA has devoted only nine pages to the health and welfare impact of the proposed regulations, and much of this is an explanation of how the Agency approached the subject. Our understanding of EPA's statistical impact analysis is that some 830,000 persons may expect an environment free from railroad noise as a result of these regulations, leaving over three million persons exposed to average daytime-nighttime sound levels of 75 decibels.

The Background Document also is deficient in documenting the extent of public participation in the rule-making process. A statement in one of the accompanying fact-finding sheets indicates that numerous local officials and media representatives were contacted, but we could find no documentation of the names of persons contacted and their reactions or inputs to the proposed regulations. Unquestionably, in developing these regulations EPA has failed to follow its plans for implementing Executive Order No. 12044 for assuring that all interested parties have an opportunity at a very early stage to participate in the development of federal regulations. We strongly urge EPA to seek a further extension of the date for final promulgation of these regulations to allow participation by interested parties.

Because of obvious limitations in the provisions for enforcement, it is questionable whether the public will accrue any benefit from the proposed regulations. The Act requires the Federal Railroad Administration (FRA) to issue rules to assure compliance with the EPA regulations, but the FRA reportedly doubts that it has the authority or the resources for adequate national enforcement. Thus, EPA expects that those State and local governments encountering noise problems covered by federal regulations will adopt and actively enforce standards identical to those in the federal regulations. However, State and

local officials may have little incentive for adopting the federal standards. The measurement criteria are far too complex to be workable, and in many instances the standards will do nothing to alleviate a local problem. Although the Act provides for waivers of preemption, the proposed regulations do not set forth the necessary ground rules and procedures for considering such actions. It is clear, however, that the preemptive nature of the Act will not be compromised by the waiver proceedings. Thus, there appears to be no mechanism for dealing with those local noise problems which impact on public health and welfare, but will not be alleviated even by effective enforcement of an applicable standard.

To provide some measure of relief through the proposed regulations, we recommend the following actions:

(1) Amend the proposed standard for car coupling operations to provide State and local officials with a more effective enforcement tool. The stated technology for controlling noise from this source is speed control, requiring only a measure of self-discipline on the part of the railroads. The industry incurs no cost and no disruption of operations from enforcement of this regulation. Therefore, there is no apparent reason why this standard should not be effective immediately upon promulgation. However, since it represents current practice it should be included as a minimum standard. We recommend that the standard be reworded as follows:

"Effective immediately, the sound level for car coupling operations shall not, at any receiving property, exceed an A-weighted sound level of 55 dB between the hours of 11:00 p.m. and 7:00 a.m. and a level of 65 dB at any other time. Whenever any State or local government has determined by measurement that the sound level of car coupling operations exceeds this standard, it may require the railroad to implement one or more noise abatement techniques to achieve this standard. Such techniques include, but are not limited to, the rescheduling, relocating or cessation of the non-complying car coupling operations. In the event that the railroad can demonstrate to the satisfaction of such government that there is no available noise abatement technique which can achieve the standard, no car coupling operation shall be performed at speeds greater than four miles per hour at the point of impact or in such manner as to cause a sound level of 95 dB at 30 meters from the center line of the track on which the coupling occurs.

(2) Simplify the measurement criteria using simple statistical procedures based upon the use of the Type II sound level meter.

Office of Noise Abatement and Control
May 29, 1979
Page Four

(3) Specify ground rules and procedures which would allow State and local governments to apply for waivers of preemption so they can deal effectively with "special local conditions" without jeopardizing the basic areas of preemption set forth in the Act.

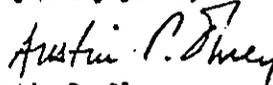
(4) Include, as a minimum, a statement of intent to the effect that as future regulations are developed, EPA will give increasingly greater consideration to alleviating the public health and welfare impact of railroad noises consistent with the findings of the Congress.

(5) In the development of these and any future railroad noise regulations, adhere strictly to the procedures set forth in EPA's plans for implementing Executive Order No. 12044. It is essential that citizen groups, the general public, and federal, state and local agencies have opportunity for input at the earliest stages of the regulatory development procedure.

(6) To the extent that any of these recommendations is contrary to provisions of the Noise Control Act of 1972, begin immediately to prepare appropriate recommendations for amendments to the statute for consideration by the Congress.

We have reviewed and concur with the statements submitted by the City of Dover, Delaware, and by Mr. Eugene B. Ruane, who resides in Dover. We join with them in urging you to reject the proposed regulations and to enlist the aid of the public, state and local governments and other interested groups in formulating a regulatory strategy which is both effective and oriented in larger measure toward the protection of the public health and welfare.

Very truly yours,



Austin P. Olney
Secretary

APO/RRF/rdr

cc: The Honorable William V. Roth, Jr.
The Honorable Joseph R. Biden, Jr.
The Honorable Thomas B. Evans
The Honorable Charles Legates
Mr. Eugene B. Ruane
The Honorable Pierre S. du Pont

NATIONAL ASSN OF NOISE CONTROL
PO BOX 2618
FT WALTON BEACH FL 32549



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USEPA-ONAC (ANR-490) ATTN BOB ROSE RAIL
CARRIER DOCKET ONAC 80-01
401 M ST SW
WASHINGTON DC 20460

THIS IS A CONFIRMATION COPY OF A PREVIOUSLY PHONE-DELIVERED TELEGRAM

THE NATIONAL ASSOCIATION OF NOISE CONTROL OFFICIALS STANDS BY ITS ORIGINAL POSITION AS STATED IN OUR JUNE 27TH 1979 LETTER TO THE DOCKET, IF PROMULGATED THIS REGULATION WOULD BE COUNTER PRODUCTIVE TO THE NATIONAL NOISE CONTROL EFFORT AND SERIOUSLY UNDERMINE STATE AND LOCAL NOISE CONTROL EFFORTS, RECOGNIZING THAT THE MAJOR PROBLEM IS SECTION 17 OF THE NOISE CONTROL ACT WE STRONGLY URGE YOU TO CALL FOR CONGRESSIONAL OVERSIGHT HEARINGS.

JESSE BORTHWICK EXECUTIVE DIRECTOR
PO BOX 2618
FT WALTON BEACH FL 32549

09120 EST

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APR 25 7 06

TO REPLY BY MAILGRAM, SEE REVERSE SIDE FOR WESTERN UNION'S TOLL-FREE PHONE NUMBERS



WILLIAM J. SCOTT
ATTORNEY GENERAL
STATE OF ILLINOIS
SPRINGFIELD
62706

April 2, 1980

Office of Noise Abatement and Control
Standards and Regulations Division (ANR-490)
Rail Carrier Docket ONAC 80-01
United States Environmental Protection Agency
Washington, D.C. 20460

Dear Sirs:

Enclosed please find the supplemental comments of the Attorney General of Illinois on the Environmental Protection Agency's "Notice of Proposed Rule Making" on Noise Emission Standards for Transportation Equipment; Interstate Rail Carriers, published January 4, 1980.

Sincerely,

Reed W. Neuman

Reed W. Neuman
Assistant Attorney General
Environmental Control Division
Southern Region

RWN:sb
Encl.

APR 11 1980
APR 11 1980

COMMENTS ON NOTICE OF PROPOSED RULE MAKING

Interstate Rail Carrier Noise Emission Standards:
Property Line Noise Standards
[Docket No. 80-01]

WILLIAM J. SCOTT
Attorney General of Illinois

The following comments are tendered as a supplementation of our intitial comments in this matter, submitted June 29, 1979 (to Docket No. 79-01).

As indicated in our prior comments, we support the proposal to establish overall railyard noise emission standards as measured on receiving property. In general, the overall receiving-property-standards concept for railyard noise most effectively brings the goals of the Noise Control Act within reach of technological feasibility and reasonable cost, and focusses the strongest abatement efforts on those areas where the potential benefits are the greatest. As noted earlier, a reclassification of "receiving property" would serve to direct abatement energies where truly needed while allowing for a more realistic assessment of the costs of the proposed regulation. However, as also noted earlier, the proposed standards appear so lenient as to do no more than preserve the status quo.

We have previously illustrated, and USEPA seems to have noted well, the appeal of a receiving-property approach which necessitates compliance (and its attendant costs) only where there exists an adverse noise impact. The limitation on overall railyard noise levels allows for the greatest flexibility in devising control strategies, and gives life to abatement options other than physical modification of the noise source. To reduce average sound energy (at receiving property) to a specified level, the railyard proprietor can apply the most cost-effective and least-disruptive abatement techniques.

It is imperative that the proposed overall limits be viewed not merely as duplicating or overlapping the specific-source standards promulgated by USEPA, but rather as supplementary controls. The specific-source standards are admittedly lenient, primarily because compliance costs, if applied across-the-board, rule out tougher limits. Overall limits, based on average energy levels, seem a good way to supplement specific-source standards where impacts on receiving property are known and severe. Given that the major sources of railyard noise have or will be covered by specific-source standards, the overall noise limits would require any

Comments (continued)
April 2, 1980
Page Two (2)

further abatement only where the noise impact is not sufficiently relieved by the specific-source standards.

Thus, to award the overall railyard noise limits a meaningful role in the regulatory scheme, the proposed limits need to be toughened substantially. As has been well documented by the Illinois EPA's field data (see Illinois EPA's 6/29/79 Comments), the limits as proposed seem to promise virtually no regulation at all, and it is not at all clear that the "overall" concept adds anything of substance to the program.

Also, to emphasize the supplementary nature of the (hopefully more stringent) overall railyard noise limits, perhaps some express language should be included to the effect that proof of compliance with any or all of the specific-source standards does not constitute a defense to a violation of the overall yard limits.

The point advanced by Illinois EPA that equivalent sound level (Leq, Ldn) measurement techniques are inappropriate descriptors for certain types of noise is well taken. Thus, to the extent that the proposed overall, time-weighted average limits are appropriate to the mix of railyard sources, we urge the adoption of the property-line noise standards, hopefully in a significantly more stringent form.

Respectfully submitted,

WILLIAM J. SCOTT
ATTORNEY GENERAL
State of Illinois

BY: Reed W. Neuman
Reed W. Neuman
Assistant Attorney General
Environmental Control Division
Southern Region

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(217) 782-9031

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Southern Region

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RWN:sb

The Federal Minister
for
Youth, Family and Health

345 - 4517

In all replies, please cite the
above transaction number.

53 BONN BAD GODLSBERG 1, March 25, 1980

P. O. Box 490

Telephone (illegible) Ext. 343
(or through operator 83433)

Telex: (illegible)

Rail Carrier Docket ONAC 80 -01
Standards and Regulations
Division (ANR-490)
U.S. Environmental Protection
Agency
Washington, D.C. 20460

Re: US Regulations (railroad noise)

Reference: Your Letter EPA - Office Air, Noise and Radiation
(ANR - 490) of January 25, 1980

I am very grateful to you for sending me the interesting materials through
your Director Henry E. Thomas. From a health perspective, I take the liberty
of making the following remarks:

The limit values for intense noise processes were worked out under the
condition of economic tolerability of technical anti-noise measures. With
the exception of speed limits during switching operations, only acoustic
engineering measures are used to increase passive noise protection. Because
these measures are very expensive, the regulated limit values are set so
high that the objective of an external level of

$$L_{dn} = 55 \text{ dB (A)}$$

is sometimes considerably exceeded for a significant number of people.

Page 4, second paragraph specifies that at this time about 6.5 to 10 million
people experience immision levels from railroad installations which exceed

$L_{dn} = 55$ dB (A). The present regulation would decrease this number by about 10 to 15 percent. The effect of the regulation cannot be easily estimated, since noise emission but not immission is limited - as it is, for example, in the traffic noise protection law of the Federal Republic. In order to be able to evaluate whether an adequate improvement of the noise situation has been reached from a health perspective, a detailed immission study would therefore be of interest.

In such a study, for example, the number of persons which are currently exceeding 55 dB (A) by 5, 10, 15, and more dB, could be compared with the corresponding number of persons after the regulation has been implemented. A value of 15 dB or more beyond this limit should in no case be tolerated, for health reasons.

Consequently, one must examine whether a maximum allowable immission limit level of

$$L_{dn} = 70 \text{ dB (A)}$$

cannot be specified in addition to the existing emission limit levels (corresponding to the German legislation on traffic noise).

A corresponding formulation is already contained in the regulation, since either the emission level or the immission level is limited for locomotive test stands (p 2, 4th paragraph), in order to minimize costs. In this case, the emission level value may be exceeded if the immission level does not exceed 65 dB (A). Analogous to this, one should examine, for reasons of health protection, whether the immission limit level required above could not be generally introduced. In contrast to a determination on the basis

- 3 -

of cost savings, a criterion more favorable for environmental protection should be chosen here.

Very truly yours,
Under authorization
(signature)
Dr. Holl

- 137 -

Der Bundesminister
für
Jugend, Familie und Gesundheit
Gesch. Z. 345 - 4517 -
Bei allen Antwortschreiben wird um Angabe obiger
Geschäftsnummer gebeten.

53 BONN-BAD GODESBERG 1, den 25. März 1980
Postfach 490
Fernruf (02221) 8347 343 ...
Telefax (02221) 8341
Fernschreiber: 8-85517
Dienststelle: Kennedyallee 105-107

Rail Carrier Docket ONAC 80-07
Standards and Regulations
Division (ANR-490)
U.S. Environmental Protection
Agency
Washington, D.C. 20460

PROPERTY OF
EPA-OAS
OFFICE OF AIR QUALITY
STANDARDIZATION

Betr.: US-Regulations (railroad noise)

Bezug: Ihr Schreiben EPA - Office Air, Noise and Radiation
(ANR - 490) vom 25. Januar 1980

Für die Übersendung der interessanten Materialien durch Herrn
Direktor Henry E. Thomas danke ich verbindlich. Aus gesundheit-
licher Sicht erlaube ich mir folgende Bemerkungen:

Die Grenzwerte für lärmintensive Vorgänge wurden unter der Be-
dingung der wirtschaftlichen Tragbarkeit von technischen Schall-
schutzmaßnahmen erarbeitet. Mit Ausnahme der Geschwindigkeits-
begrenzung beim Rangieren werden nur technisch akustische Maßnahmen
zur Erhöhung des passiven Schallschutzes in Rechnung gesetzt. Wegen
der hohen Kosten dieser Maßnahmen werden die Regelgrenzwerte so
hoch angesetzt, daß das Ziel eines Außenpegels von

$$L_{dn} = 55 \text{ dB (A)}$$

für eine beträchtliche Bevölkerungszahl zum Teil erheblich über-
schritten wird.

Auf S. 4 2. Absatz wird angegeben, daß z.Zt. ca. 6,5 bis 10 Mill.
Menschen bei höheren Immissionspegeln von Eisenbahnanlagen als L_{dn}
= 55 dB (A) leben. Durch die neue Regulation würde diese Zahl ca.
10 - 15 % kleiner werden. Die Auswirkung der Regulation ist nicht

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leicht abzuschätzen, da die Schallemission, nicht aber die Immission - wie z.B. im Verkehrslärmschutzgesetz der Bundesrepublik - begrenzt wird. Um beurteilen zu können, ob vom gesundheitlichen Standpunkt eine ausreichende Verbesserung der Lärmsituation erreicht werden wird, wäre deshalb eine detaillierte Immissionsuntersuchung von Interesse.

Bei dieser Untersuchung könnten z.B. die Bevölkerungszahlen gegenübergestellt werden, die z.Zt. und nach Durchführung der Vorschrift den Wert von 55 dB (A) um 5, 10, 15 und mehr dB überschreiten. Überschreitungen von 15 und mehr dB sollten aus gesundheitlichen Gründen in keinem Fall toleriert werden.

Daher sollte geprüft werden, ob nicht zu den vorgesehenen Emissionsgrenzpegeln ein höchstzulässiger Immissionsgrenzpegel von

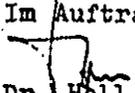
$$L_{dn} = 70 \text{ dB (A)}$$

festgelegt werden kann (entsprechend der deutschen Gesetzgebung zum Verkehrslärm).

Ein entsprechender Ansatz ist bereits in der Regulation enthalten, da aus Kostenersparnisgründen für Lokomotiv-Prüfstände (S. 2 4. Absatz) entweder der Emissionspegel oder der Immissionspegel begrenzt wird. In diesem Fall darf der Emissionspegelgrenzwert überschritten werden, wenn der Immissionspegel 65 dB (A) nicht übersteigt. Analog dazu sollte aus Gründen des Gesundheitsschutzes geprüft werden, generell den oben geforderten Immissionsgrenzpegel einzuführen. Entgegen einer Festlegung nach Kostenersparnisgründen wäre hierbei das für den Umweltschutz günstigere Kriterium zu wählen.

Mit vorzüglicher Hochachtung

Im Auftrag


Dr. Holl

APPENDIX



METROPOLITAN DADE COUNTY • FLORIDA

909 S.E. First Avenue
Brickell Plaza, Building - Rm. 402
Miami, Florida 33131
Telephone: 379-2760

ENVIRONMENTAL RESOURCES MANAGEMENT

July 2, 1979

Mr. Henry Thomas
U. S. Environmental Protection Agency
401 "M" Street, S.W.
Washington, D.C. 20460

SUBJECT: Comments on Proposed Noise Regulations

Dear Mr. Thomas:

This office has reviewed the proposed rules governing noise levels from railroad yards throughout the United States. The EPA also has rules which govern noise from the trains themselves as they move from one local jurisdiction to another. In general, we question the enforceability of the proposed rules since average noise level readings are proposed rather than maximum levels. Considerable time and effort will be required of the enforcing agency in order to obtain results on which to base a violation of the standards.

More specifically, we question the exclusion by EPA of rules regulating "Horns, Bells & Whistles". These warning devices are part of the train and therefore move from one jurisdiction to another. It would be very difficult operationally for regulations to vary in different states or counties and EPA is the only regulatory agency which can adopt a national standard on the devices. As you are aware these devices are very noisy and in some cases constitute the primary source of noise creating a nuisance to the surrounding neighborhood. We strongly urge that EPA reconsider excluding these devices from the proposed regulations since their continued operation on a routine basis will make it almost impossible to control the noise nuisance no matter how effective the remaining rules turn out to be. Also, enforcement is made that much more difficult by the exclusion since average noise readings taken in accordance with the proposed regulations would have to be adjusted so that the contribution from the warning devices is not reflected in the final average noise level.

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We have also consulted with the Office of the County Attorney who has suggested that EPA's most recent draft regulations which exclude from their consideration "horns, bells and whistles" would also be in violation of the mandate of the United States Court of Appeals for the District of Columbia as set forth in the case of Association of American Railroads v. Costle, 562 F.2d 1310 (D.C. App. 1977). In that case, certain exclusions in your previous regulations regarding this matter, including the exclusions for horns, bells and whistles and other warning devices, was considered by the court as to whether or not such exclusions were permissible under the clear and distinct mandate of the Noise Control Act of 1972. In holding that the exclusions were not permitted the Court stated: (562 F.2d at 1315)

...there is absolutely no indication in Section 17(a)(1) that Congress intended to vest discretion in the E.P.A. to decide which of the equipment and facilities would be subject to regulation. Nothing in the statute diminishes or qualifies the generality of these two key words -- equipment and facility. Nothing in the statute states that only certain kinds of equipment or facilities need to be regulated. The plain and natural meaning of the phrase 'the equipment and facilities' is that the power of the E.P.A. is plenary with respect to those objects and places customarily thought to be included in the definition of the phrase. To read this language otherwise would be to distort a relatively clear signal from the national legislature. Indeed, in the context of this case, the E.P.A. chose not to regulate any 'facilities' at all; this action in effect reads this word out of the statute. We are not prepared to label this word as being superfluous to the statutory mandate.

The court also noted that the EPA itself had shown that it was capable of defining railroad "equipment and facilities" in a realistic and reasonable manner and noted that the background document for Railroad Noise Emission Standards identified certain broad categories of railroad equipment and facilities including "horns, whistles, bells and other warning devices..." (Id. at 1319). The court hereupon found that the failure of EPA to regulate such equipment was a violation of the statutory mandate to compel the EPA to promulgate new regulations to cure these defects.

The existing proposed regulations attempt to cure one defect while leaving the others in existence. This expressed intent by EPA to not regulate acknowledged railroad equipment such as horns, whistles, bells and other warning devices is as clear a violation of the statutory mandate as is possible as previously noted by the court.

Mr. Henry Thomas

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July 2, 1979

Accordingly, we would respectfully request the EPA obey the mandate of the Court of Appeals and the express statutory mandate of the Noise Control Act of 1972 and promulgate a regulation setting a national standard for noise emissions from horns, whistles, bells and other warning devices.

Very truly yours,



Colin Morrissey, Director
Environmental Resources Management

CM/RR/JJn
Enclosure

cc: Peter Tell
Asst. County Attorney



GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
WASHINGTON, D. C. 20004

JUL 2 1979

Henry E. Thomas, Director
Standards and Regulations Division (ANR-490)
United States Environmental Protection Agency
Office of Air, Noise and Radiation
Washington, D. C. 20460

Dear Mr. Thomas:

The U. S. Environmental Protection Agency's proposed revised and expanded railroad noise regulations, that by 1982 will extend Federal noise controls to most equipment and facilities of interstate rail carriers, has been reviewed.

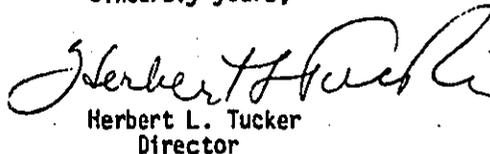
The District of Columbia's Noise Control Act (D. C. Law 2-53) of 1977, Section 5(5) states:

"Vehicles propelled only upon rails and tracks shall be exempt at all times".

The EPA's railroad noise regulations will not, therefore, preempt existing state ordinances.

Many thanks for your interest.

Sincerely yours,


Herbert L. Tucker
Director

6282D ANR-490

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ACOUSTICAL SOCIETY OF AMERICA

ROBERT W. YOUNG
ASSOCIATE EDITOR



NAVAL OCEAN SYSTEMS CENTER
SAN DIEGO, CALIFORNIA 92152

THE JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA

5 July 1979

Rail Carrier Docket No. ONAC 79-01
Office of Noise Abatement and Control (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

Gentlemen:

1. This is to invite your attention to some technical inaccuracies in the proposed Rules for Noise Emission Standards ... for Rail Carriers, Federal Register Vol. 44, No. 75, April 17, 1979, and to offer words to correct those inaccuracies. Many of my suggestions are aimed at replacing the jargon of governmentese with plain language. Corrections of inaccuracies will possibly result in inconsistency with some earlier EPA documents in which the same inaccuracies occurred; but now is the time to correct for the future.

2. A serious defect in the proposed Rules is the omission of the word "average" in the name of the quantity represented by the symbol L_{dn} . In an early report the EPA correctly told Congress it was going to use day-night average sound level (L_{dn}); the EPA should continue to say "average" where appropriate. It is extremely important that the word "average" be reiterated, again and again, so the public will understand that a 24-hour average sound level is being prescribed, and not a maximum sound level such as is commonly prescribed for a vehicle driveby. It is bad to require a reader to look at 4 pages before he is told what L_{dn} really is. I urge you to revise the fifth paragraph of 2.0 The Proposed Regulation to read:

The letter symbol L_{dn} stands for day-night average sound level. This is a 24-hour average sound level, obtained after addition of ten decibels to sound levels in the night before 7 a.m. and after 10 p.m. Rationale for the use of this descriptor appears in Section 4.

3. The word Standard as used in these Rules means an upper limit not to be exceeded, not in the sense of a standard gallon that is neither to be exceeded nor subsided beyond certain tolerances. At the bottom of the middle column of page 22964, "... to alter operations to achieve the 65 L_{dn} value" could be taken to mean that if the noise is less than the standard the noise should be increased to conform to the standard. A much better wording is "... to alter the operations so as to lower the day-night average sound level at the yard boundary to 65 decibels." I suggest that "reduction" be described to conform to the standard, or that instead some term such as noise limit be employed.

4. Much of the jargon can be ameliorated by use of the long-standing editorial principle that text be written with full words rather than with quantity symbols or unit symbols. At the bottom of the third column of page 22962, "70-decibel standard" is correctly written out. In tables where space is limited, this would of course

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be 70 dB. Use of dB is acceptable in text if it is preceded by a number, in fact it is often preferable in technical writing, but I am suggesting that for regulations to be understood and discussed by the public that decibel be written out.

5. The clumsy clause on page 22965, "...people...exposed to day-night average railyard noise levels of 55 L_{dn} or greater" should be replaced by something like "...people... near railyards exposed to day-night average sound levels of 55 decibels or greater." On page 22964, "exceed the hourly Leq value..." should be replaced by "...exceed the one-hour average sound level..." It is jargon in what is apparently the caption of Table 4.4, "...To Go From L_{dn}70 to L_{dn}65." This will be better understood when worded: "Additional costs to reduce the day-night average sound level at hump-yard boundaries from 70 to 65 decibels.

6. Enclosed are proof pages 6, 7, 8, 22, 23 of American National Standard Letter Symbols and Abbreviations for Quantities Used in Acoustics, Y10.11-[1979]. It is expected that this standard will receive final approval in 60 days. Notice on page 6 that the attachment of an A to dB is strongly deprecated, and that the decibel is not A-weighted. This is a long-standing principle for unit symbols, not new in Y10.11-1979. The caption for Table 2.1(c) of the proposed Rules is "Equivalent of 70 L_{dn} for 24 Hours in A-weighted dB." This is wrong on several counts; let me note first of all that the A-weighted decibel should be erased from every EPA document as quickly as possible! In general, in text 70 dBA should be replaced by 70 decibels; in small space, by 70 dB. Section 201.16 is already correctly worded; "...an A-weighted sound level of 90 dB at 30 meters from the centerline..."

7. As mentioned above, throughout the Rules day-night sound level needs to be replaced by day-night average sound level, specifically in definitions (u), (ee), (hh) in Section 201.1. The word "equivalent" is to be replaced by "average" in definitions (aa), (bb), (ff), and many places throughout the Rules. There is now nothing in the definitions (and correctly so) to explain that anything is equivalent to anything else; hence "equivalent" must be eliminated in the name also. It is a great disservice to mystify the public with an undefined hourly equivalent sound level, when hourly average sound level is relatively self-explanatory.

8. The sentence in (u), "When the day-night...begin at midnight", is not part of the definition. It should be moved to Section 201.31.

9. Contrary to (u), the abbreviation for day-night average sound level is DNL, per Y10.11-1979; the quantity symbol for it is L_{dn}. Contrary to definition (w), dB is the unit symbol for decibel, not the abbreviation. For definition (bb), the term ought to be one-hour average sound level for which the abbreviation is L_{1h} and the convenient quantity symbol is L_{1h}.

10. In definition (dd), the word Fast should be inserted after greatest, even though it is technically included in definition (qq) for sound level. Fast (or FAST if preferred) should be similarly inserted throughout the text in connection with maximum sound level, because many people will not read as far as the definitions, and many think that only slow sound level is always measured.

11. I do not understand "Partial Day-night Sound Level", definition (hh). I do not understand why only "some of the hourly values" are utilized, if more are available. If one were to assume zero level for each hour for which a measured hourly average sound level is not available he would unavoidably arrive at a day-night average sound level less than the true day-night average sound level. I suspect that "extrapolated" might be more descriptive than "partial".

12. Only the first sentence of (pp) should be retained as the definition of sound exposure level. The remainder in much modified form belongs in Subpart D on measurement technique. But even there, the measurement should not be limited to times "when a specified threshold" is exceeded. In the practical measurement of sound exposure level there must be freedom to select whatever threshold is necessary to cope with the extraneous noise in a given situation. It is not feasible to set the threshold "at least ten decibels below the maximum sound level of the event" before the event has actually occurred; in some situations of steady background noise it is feasible to deduce the sound exposure level within 1 dB when the maximum sound level is only 6 dB above the background. There should be no "specified threshold" in these Rules.

13. The appearance of the word "means" in technical definitions is very disconcerting. It suggests that elsewhere in the technical literature "sound level", for example, is something different than what is defined here. I urge that you replace "means" by "is", so the correct definition will be copied in the many cities that look to the EPA for guidance. Better still, write the definitions in dictionary format, with "is" omitted and without initial capital letters; this is now the format required by standards bodies.

14. In Section 201.31(a)(1) for sound exposure level, an integrating sound level meter is not required to have any sensitivity to sounds that last less than 100 milliseconds. Such a loose requirement is very inadequate for the very impulsive sounds of car coupling and hump yards. Portable instruments are now available for measuring sound exposure level, automatically, of pulses as short as 1 ms, within 1 dB of the theoretical level of the pulse relative to steady state. I suggest that instrumentation be required to integrate correctly within ± 1 dB, as short as 2 ms.

15. It would be a mistake in 201.31(b)(2) for one-hour average sound level, to require only that signals that last longer than one second and whose frequencies lie between 200 and 1000 hertz need be integrated correctly. While it is true that some of the instruments which were used to collect the background information for this rail carrier regulation may not have been capable of integrating correctly sounds lasting less than a second, instruments are available that will integrate and average correctly pulses shorter than 1 ms. It is important to specify instrumentation that will integrate and average correctly all the sound that occurs during an hour, within the tolerances at different frequencies for a Type 1 sound level meter, whether the sound is steady or consists of isolated tonebursts each as short as 2 ms.

16. Sound exposure level is given much less attention in the proposed Rules than it really deserves. The present measurement of
fast sound level at 7 or 30 meters from the source gives no indication of how long a sound lasts or how frequently it occurs. But sound exposure automatically takes into account both magnitude and duration. The sound of any discrete event, such as a succession of car couplings or the passing of a train, should be monitored by sound exposure level, not by maximum sound level. If desired, sound exposure level can be obtained for all the sounds that occur in an hour.

17. I do not agree that (at the middle of page 22961) "Tables 2.1(c) and 2.1(d) provide a simplified reference for determining the compliance...." Even with informative table captions (the present ones are not), the method is unduly involved. It is not adequate to assume that all the noise that will occur at a site has occurred during the hour or two during which someone happened to measure. The costs of making remedial changes in railroad equipment are so high, in comparison with running

R. W. Young to
Rail Carrier Docket No. OUMC 79-01

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Page 4

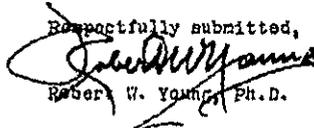
an automatic noise monitoring equipment for a week or so, that there is no justification to report compliance or non-compliance on the basis of a test for an hour or two. What constitutes a "long-enough" test period depends upon the typical distribution of the rail carrier operations. Largely from my experience with highway noise and airport noise I am guessing that a week is the minimum period during which the one-hour average sound level and the day-night average sound level ought to be monitored. Ordinarily it is not worth while to monitor maximum sound levels during the week.

18. Nevertheless, if a rough screening test is wanted, it can be made easily by measuring the one-hour average sound level at the nearest residence. If the measurement was made in the daytime and it exceeded the day-night average sound level limit for that location, then more monitoring may be in order; if the measurement was made at night and if the one-hour average sound level was greater than the limit there minus 10 decibels, likewise more monitoring may be in order. But none of this is conclusive.

19 It is alleged on page 22964, first column, that a day-night average sound level, being a 24-hour average, does not account sufficiently for the irritating and intrusive screeches of retarders being clamped against wheels. In a superficial glance at the background information, I did not see any tests in support of this allegation. I did notice, however, that some instrumentation used is not capable of adequately integrating the short screeches. It is not feasible for a local government - nor for the FRA - to monitor the fast sound level of isolated screeches that may occur at any time of the day or night, particularly if the speed of the car must also be measured. But it is feasible and cost effective, to install in residential areas an automatic environmental noise monitor of adequate dynamic range that unattended will print in compact format the one-hour average sound level, the day-night average sound level, and sound exposure levels (with times of occurrence) of especially noisy events. (At least two models will also print the maximum sound level during a noisy event but I have seen little use later made of such data.) I believe the Rules should be simplified by elimination of limits on maximum sound level at stated distances.

20. Most of the advice above is aimed at making rules for noise abatement easy to understand and to enforce, by use of average sound levels, plain English and full words, in consonance with Executive Order 12044. When abbreviations or letter symbols are needed, they should be taken from ANSI Y10.11-1979. There are other EPA noise standards and regulations to which this advice is also relevant; I suggest that copies of this advice be made available to those in the EPA who are preparing or revising other noise regulations.

Respectfully submitted,



Robert W. Young, Ph.D.

Encl: Y10.11-1979 pages
6,7,8,18,22,23.

5.3.1 Attachments to Unit Symbols. Because a unit is fixed and unique, it cannot be modified. On the other hand, a variable quantity which may be modified is independent of the unit in which it is measured. For both reasons, it is misleading and incorrect to attach any letter to a unit symbol in an attempt to qualify, modify, or describe the quantity whose unit it represents. Exceptions are those cases where a subscript changes the meaning of a unit symbol as, for example gal_{US}, gal_{UK}, cal_{IT}, cal_{th}. Such cases rarely occur in acoustics.

Any attachment to a unit symbol, other than a standard prefix, is strongly deprecated.

5.3.2 Indication of the Unit of a Quantity. In text, when the unit of a quantity is mentioned, the name of the unit should be spelled out in full, e.g., attenuation coefficient in decibels per meter. A slight condensation may be attained with a comma or parentheses, e.g., attenuation coefficient, decibels per meter, or attenuation coefficient (decibels per meter). However, a unit symbol is allowed in text, and often is preferred, when preceded by a numeral, e.g. The 1-kHz sound pressure level was 70 dB.

In graphs and tables, where space permits, the name of the unit should be similarly spelled out. Where space does not permit, the unit symbol should be used.

5.4 Remarks Concerning Levels

A level is treated like any other quantity and may be represented by a quantity symbol with a subscript, as listed in Tables 9 and 10. The name level, by itself, is incomplete because there are many different kinds, e.g. voltage level, power level, and A-weighted sound level. Moreover, the statement of the value of a level is incomplete unless the reference quantity is known to the reader.

5.4.1 Notation for expressing the reference of a level. A level representing a quantity x with a reference quantity x_{ref} may be indicated by:

$$L_x \text{ (re } x_{ref}) \text{ or by } L_x/x_{ref}$$

Examples.

The statement that a certain sound pressure level in air is 15 dB above the level corresponding to a reference pressure of 20 μ Pa can be written as:

$$L_p \text{ (re } 20 \mu\text{Pa)} = 15 \text{ dB or as } L_p/20 \mu\text{Pa} = 15 \text{ dB}$$

The statement that the level of a current is 10 Np below 1 A can be written as:

$$L_I \text{ (re } 1 \text{ A)} = -10 \text{ Np}$$

The statement that a certain power level is 72 dB above 1 pW can be written as:

$$L_K \text{ (re } 1 \text{ pW)} = 72 \text{ dB,}$$

In a situation where the reserve symbol L_K is needed to avoid confusion.

The statement that a certain electric field strength is 50 dB above 1 μ V/m can be written as:

$$L_E \text{ (re } 1 \mu\text{V/m)} = 50 \text{ dB.}$$

In presenting data, particularly in tabular form or in graphical symbols, a condensed notation is often needed for identifying the reference value. Then the following condensed form, illustrated by application to the above examples, may be used:

$$\begin{aligned} 15 \text{ dB. (20 } \mu\text{Pa)} \\ 10 \text{ Np. (1 A)} \\ 72 \text{ dB. (1 pW)} \\ 50 \text{ dB. (1 } \mu\text{V/m)} \end{aligned}$$

Note that there is a space before the parentheses.

A "1" in the expression of a reference quantity is sometimes omitted. This is not recommended because confusion may occur.

When a constant reference quantity is used repeatedly in a given context and explained in the text, it may be omitted.

5.4.2 Indication of the Weighting of a Level. Frequently in acoustics, a sound pressure level or a sound power level is said to be weighted according to the A, B, C, or other frequency weighting curve. These are commonly called weighted levels, but properly should be called levels of weighted pressure or power. With any weighted level, the unit of measurement is unchanged. It is still the decibel, or bel, or neper. The practice of indicating weighting by attaching letters to dB, as in dBA or PNdB, has led some persons to the incorrect belief that weighted levels are measured on a different scale, or by a frequency weighted decibel. *Such attachments are incorrect, and are strongly deprecated. (See paragraph 5.3.1.)*

The designation PNdB is deprecated for any use, whether to mean perceived noise level or a nonexistent perceived noise decibel.

The decibel itself is never weighted. The symbol dB is a unit symbol, and is neither a quantity symbol nor an abbreviation for level.

Any qualification of a level should be indicated, not by attaching letters to the unit symbol dB or B or Np, but by attaching appropriate subscripts to the quantity symbol L , or by an appropriate abbreviation, as in Tables 9 and 10. An example is L_{AF} for fast, A-weighted sound level. In a limited context, where it has been made clear what kind of weighting is concerned, the symbol L may be used without a subscript.

5.4.3 Sequence of Subscripts for a Level. A succession of subscripts on L , the quantity symbol for a level, identifies the kind of level and frequencywise and timewise modifications of it. For example, L_{PA} first of all represents the level of a power for which the symbol is P ; secondly, the A signifies that the A-frequency weighting was applied.

In acoustics, the absence of a first subscript for the kind of level is an indication that the symbol L stands for a sound pressure level. The subscripts signify modifications of sound pressure level. For example, L_{AS} represents the level of A-frequency weighted, squared sound pressure followed by slow exponential time averaging.

As another example, L_{C8h} represents an 8-hour average, C-weighted sound level; the C-frequency weighting was applied to the sound pressure signal; next the sound pressure was squared; then the arithmetic mean of the squared sound pressures was taken during 8 hours; finally the level was obtained.

Sound level is understood to mean A-weighted sound pressure level if no frequency weighting is specified. Hence in a context in which only sound level is involved, L represents (A-weighted) sound level, and L_{8h} or simply L_{8h} represents an 8-hour average sound level. The usual unit of all these levels is the decibel.

Maximum tone-corrected perceived noise level is a special frequency-weighted sound pressure level with nominally "slow" time averaging. The quantity symbol is L_{PNTmax} . The first two subscript letters PN signify the somewhat involved "perceived noise" frequency weighting; the subscript T signifies a further frequency weighting for prominent tonal components; after the slow exponential time average, another time weighting identified by max is applied by selection of the greatest tone-corrected perceived noise level that occurs during (for example) the flyover of an aircraft.

5.5 Remarks Concerning Abbreviations

An abbreviation is a shortened form of a word or phrase, used to represent the complete form. The shortened form is attained by omission of some letters, even all of the letters of some words. The abbreviations recommended in this Standard use capital letters, particularly for convenience in the use of a computer-controlled printer which often can print only capitals.

5.5.1 Use of Abbreviations. Abbreviations are to be used only where necessary to save space or time. The time saved by a writer who uses an abbreviation is often less than the time lost by each reader who must find its meaning. An abbreviated term should be spelled out in full at its first appearance in text, followed by the abbreviation in parentheses. In addition, a glossary may be provided for the convenience of the reader.

Abbreviations for the names of quantities are used as nouns because the names they stand for are nouns or noun phrases. They may also be used as adjectives, as for example: "the day-night average sound level limit" may be abbreviated to "the DNL limit". As a further example, the statement: "The limit is 92 decibels, fast, A-weighted sound level at 15 meters" can be shortened to "The FA limit at 15 m is 92 dB".

Abbreviations should not immediately follow a unit symbol. For example, instead of "92 dB FA", use "FA: 92 dB".

5.5.2 Foreign Use. Abbreviations should be especially avoided in publications and drawings that are intended for circulation in foreign countries, because they are formed from words that often differ from one language to another. In this respect, abbreviations stand in contrast to letter symbols for quantities and units that are standardized internationally.

5.5.3 Mathematics. Abbreviations should not be used in mathematical formulations. Letter symbols should be used instead.

5.5.4 Sequence of Letters in an Abbreviation. The original sequence of letters in the words, and of words in any phrase, is to be maintained in an abbreviation. As an example, day-night average sound level is abbreviated to DNL; the single letter L in this context serves as the abbreviation for average sound level. LDN or Ldn is not correctly an abbreviation for day-night average sound level because LDN or Ldn is not a shortened form of the full phrase.

In phrases and abbreviations in this Standard for oscillating quantities, the averaging time is stated first, the limiting frequency band second, the kind of variable is next, and finally level. For example, 8HL is the abbreviation for 8-hour average sound level; much of the abbreviation is feasible because sound level unmodified has the connotation of sound pressure level within the frequency band delimited by the A-frequency weighting. As a longer example of the sequence, slow octave-band sound pressure level centered on 125 hertz may be abbreviated to SOBSPL at 125 Hz.

5.5.5 Invariance of Form. The form of an abbreviation shall be invariant. Syntactical endings shall not be used. For example, an s shall not be added to indicate plural.

5.5.6 Subscripts. Subscripts should not be used in or with abbreviations.

5.5.7 Punctuation. Except as shown in abbreviations in this Standard, punctuation marks shall not be used as part of an abbreviation. However, a period may be placed at the end of any abbreviation that spells an English word if the omission of such a period could result in confusion.

5.5.8 Capitalization. As a general rule, lower case letters are recommended for abbreviations in text and in tabular matter when the words for which they stand for would normally be printed in lower case. This Standard, however, shows abbreviations in capitals in accordance with long-standing practice in acoustics.

5.5.9 Additional Abbreviations. For abbreviations of terms other than those in this Standard, authors are advised to refer to American National Standard ANSI Y1.1-1972, Abbreviations for Use on Drawings and in Text.

INTRODUCTION TO THE TABLES

Tables 1 through 10 list quantities, grouped in several categories, and give quantity symbols for each. In addition, Tables 8 through 10 give standard abbreviations for the quantities listed in them. (Abbreviations are usually not appropriate for the quantities listed in Tables 1 through 7.) Only abbreviations are given for some quantities that are not operated on mathematically, and so do not require letter symbols. To aid in identifying the quantities, their units based on the International System (SI) and their standard unit symbols are included.

A quantity shall be represented by the standard symbol appearing in the Tables, regardless of the units in which it is expressed. Those quantity symbols that are separated by a comma are alternatives on equal standing. A symbol enclosed in parentheses is a reserve symbol, to be used only where there is a specific need to avoid a conflict.

Tables 1 through 5 contain quantities of interest in acoustics, many of whose symbols have already been standardized for broad fields of application. These have been copied from ANSI Y10.5-1968 and the same item numbers retained. Those items not commonly of interest in acoustics, including all of Table 4 RADIATION AND LIGHT, have not been copied, and consequently there are gaps in the item numbers. A few items not in ANSI Y10.5-1968 have been added, and given numbers followed by a letter. Every item identified by a number without a letter has been copied with no change in the letter symbol, except where noted under Remarks. Tables 6 through 10 contain quantities of interest primarily in acoustics, and bear no particular relation to ANSI Y10.5-1968.

Quantity symbols and abbreviations are listed alphabetically in Tables 11 and 12 for ready reference. Finally, all quantities, together with variants of their names, are listed in the index.

TABLE 6. ACOUSTICS (Cont'd)
Symbols for Quantities

Item	Quantity	Quantity Symbol	Unit Based on International System	Unit Symbol	Remarks
6.27	sound energy	E, W	joule	J	} Use subscripts P and K to denote potential and kinetic energy. cf. 2.23 a and 2.23 b. $E_x = \int_0^t p^{n/x} dt$ The sound pressure may be frequency weighted.
6.28	sound energy density	w (r)	joule per cubic meter	J/m ³	
6.29	sound exposure at x dB per halving of duration	E_x	pascal to the 5/x power times hour	Pa ^{5/x} h	
→ 6.30	sound exposure (at 3 dB per halving of duration)	$E(L_3)$	pascal squared times hour	Pa ² h	1 Pa ² h is the exposure for 8 h at 85 dB re 20 μPa.
6.31	sound exposure at 5 dB per halving of duration	$E(L_5)$	pascal to the 1.2 power times hour	Pa ^{1.2} h	1 Pa ^{1.2} h is the exposure for 8 h at 70 dB re 20 μPa.
6.32	characteristic impedance of a medium	Z_c	pascal second per meter	Pa·s/m	$Z_c = \rho c$
6.33	specific acoustic impedance	Z_s	pascal second per meter	Pa·s/m	$Z_s = \rho/u$
6.34	specific acoustic admittance	Y_s	meter per pascal second	m/(Pa·s)	$Y_s = 1/Z_s$
6.35	acoustic impedance	Z_a	pascal second per cubic meter	Pa·s/m ³	$Z_a = Z_s/A = R_a + jX_a$
6.36	acoustic resistance	R_a	pascal second per cubic meter	Pa·s/m ³	
6.37	acoustic reactance	X_a	pascal second per cubic meter	Pa·s/m ³	$X_a = m_a \omega - K_a/\omega$
6.38	acoustic mass, acoustic inductance	m_a	pascal second squared per cubic meter	Pa·s ² /m ³	$m_a = X_a/\omega$ 1 Pa·s ² /m ³ = 1 kg/m ³
6.39	acoustic stiffness	K_a	pascal per cubic meter	Pa/m ³	$K_a = -\omega X_a$
6.40	acoustic admittance	Y_a	cubic meter per pascal second	m ³ /(Pa·s)	$Y_a = 1/Z_a = G_a + jB_a$
6.41	acoustic conductance	G_a	cubic meter per pascal second	m ³ /(Pa·s)	
6.42	acoustic susceptance	B_a	cubic meter per pascal second	m ³ /(Pa·s)	
6.43	acoustic compliance	C_a	cubic meter per pascal	m ³ /Pa	$C_a = 1/K_a$
6.44	mechanical impedance	Z_m	newton second per meter	N·s/m	$Z_m = AZ_a = R_m + jX_m = F/v$
6.45	mechanical resistance	R_m (c)	newton second per meter	N·s/m	Also called damping coefficient, but that is deprecated for this purpose, cf. 6.59
6.46	mechanical reactance	X_m	newton second per meter	N·s/m	$X_m = m_m \omega - K_m/\omega$
6.47	dynamic mass	m_m	kilogram	kg	$m_m = X_m/\omega$
6.48	dynamic stiffness	K_m, k	newton per meter	N/m	$K_m = -\omega X_m$
6.49	mechanical admittance, mobility	Y_m	meter per newton second	m/(N·s)	$Y_m = 1/Z_m = G_m + jB_m = v/F$
6.50	mechanical conductance	G_m	meter per newton second	m/(N·s)	

TABLE 9. LEVELS AND NOISE RATINGS
Abbreviations and Symbols for Quantities

Item	Quantity	Abbreviation	Quantity Symbol	Unit Symbol	Remarks
9.1	sound pressure level in a stated frequency band	SPL	L_p	dB	The symbol N for level is deprecated
9.2	fast A-weighted sound level	FA	L_{AF}	dB	
9.3	slow A-weighted sound level	SA	L_{AS}	dB	
9.4	fast B-weighted sound (pressure) level	FB	L_{BF}	dB	
9.5	slow B-weighted sound (pressure) level	SB	L_{BS}	dB	
9.6	fast C-weighted sound (pressure) level	FC	L_{CF}	dB	
9.7	slow C-weighted sound (pressure) level	SC	L_{CS}	dB	
9.8	fast D-weighted sound (pressure) level	FD	L_{DF}	dB	
9.9	slow D-weighted sound (pressure) level	SD	L_{DS}	dB	
9.10	octave-band sound pressure level	OBSPL	$L_{1/1}$	dB	
9.11	one-third-octave-band sound pressure level	TOBSPL	$L_{1/3}$	dB	
9.12	sound power level	PWL	$L_p(L_K)$	dB, B	
9.13	A-weighted sound power level	APWL	$L_{PA}(L_{KA})$	dB, B	Substitute B, C, etc. to denote other weightings
9.13a	noise power emission level	NPEL	L_{NPE}	B	$L_{NPE} = L_{PA}$
9.14	product noise rating, hemispherical source sound level	PNR		dB	Space average sound level at 1 m; see ANSI S3.17-1975.
9.15	sound pressure spectrum level	PSL	L_{ps}	dB	
9.16	impulse A-weighted sound level	IAL	L_{AI}	dB	Substitute B, C, etc. to denote other weightings.
9.17	average sound level during time T	TAL	L_{avT}	dB	$L_{avT} = 10 \log (E/p_0^2 T)$ where $p_0 = 20 \mu Pa$.
9.17a	equivalent steady sound level	QL	L_{eq}	dB	Same as average sound level.
9.18	hourly average sound level	1HL	L_{1h}	dB	Also called 1-hour equivalent continuous sound level
9.19	8-hour average sound level	8HL, 8HAL	L_{8h}	dB	Substitute B, C, etc., in abbreviation and symbol to denote other weightings.
9.20	day average sound level	DL	L_d	dB	0700-2200 hours
9.21	daytime average sound level	DTL	L_{d12}	dB	0700-1900 hours
9.22	evening average sound level	EL	L_{ev}	dB	1900-2200 hours
9.23	night average sound level	NL	L_n	dB	0000-0700 and 2200-2400 hours
9.24	day-night average sound level	DNL	L_{dn}	dB	24 h average after 10 dB added to L_n
9.25	community noise equivalent level	CNEL	L_{den}	dB	24 h average after 5 dB added to L_{ev} and 10 dB to L_n
9.26	A-weighted sound exposure level	ASEL, SEL	$L_{AE}(L_{AX})$	dB	The level of E (see item 6.30) re $(20 \mu Pa)^2$ and 1 s. Substitute B, C, etc. to denote other weightings.
9.27	fast, A-weighted sound level exceeded 10% of time		L_{10}	dB	Other exceeded percentiles are similarly indicated.

TABLE 9. LEVELS AND NOISE RATINGS (Cont'd)
Abbreviations and Symbols for Quantities

Item	Quantity	Abbreviation	Quantity Symbol	Unit Symbol	Remarks
9.28	noise pollution level	NPL	L_{NP}	dB	$L_{NP} = L_{Aq} + 2.56\sigma$ The constant 2.56 is subject to revision. σ = standard deviation.
9.29	maximum A-weighted sound level	MXAL	$L_{A,max}$	dB	Greatest fast, A-weighted sound level during an event, unless other time and frequency weightings are indicated by appropriate subscripts.
9.30	peak A-weighted sound level	PKAL	$L_{A,pk}$	dB	Greatest instantaneous A-weighted sound level. Substitute B, C, etc. to denote other weightings.
9.31	noise and number index	NNI		dB	$L_{PN,max} + 15 \log n - 80$ n = number of audible events.
9.32	traffic noise index	TNI		dB	$L_{90} + 4(L_{10} - L_{90}) - 30$
9.33	noise criterion level	NC		dB	Level at 1.7 kHz of a noise criterion curve, tangent to octave-band spectrum. (See L. L. Beranek, <i>Noise Control</i> , vol. 3, pp. 19-27, January 1957.)
9.34	preferred frequency noise criterion level	PNC		dB	Level at 1.0 kHz of noise rating curve tangent to octave-band spectrum. (See Beranek, Blazier and Figner, <i>J. Acoust. Soc. Am.</i> 50, 1223 (1971).)
9.35	rating sound level (ISO 1996-1971)		L_T	dB	24 h average sound level plus any correction for tone or impulse.
9.36	ARI sound rating number	SRN		3.3 dB	Equal to 0.4 plus 0.30 times A-weighted sound level at 10 ft. (See ARI Standard 275-59)
9.37	ARI sound level number	SLN		3.3 dB	Such use of "sound level" is deprecated.
9.38	sound transmission loss, sound reduction index, sound insulation (of a partition)	TL	R	dB	See ASTM E90 and E336, also ISO/DIS 140/III.
9.39	noise reduction	NR	D_f	dB	Difference in space-time-average sound pressure level in two rooms at frequency f .
9.40	level reduction (by a barrier)	LR		dB	
9.41	sound level difference	SLD	D_A	dB	
9.42	field transmission loss (of a partition)	FTL		dB	See ASTM E336
9.43	sound transmission class (of a partition)	STC		dB	See ASTM E413
9.44	field sound transmission class (of a partition)	FSTC		dB	See ASTM E336
9.45	airborne sound insulation (of a partition)		I_a	dB	See ISO/R 717-1963 Rating of sound insulation for dwellings
9.46	noise isolation class (between rooms)	NIC		dB	See ASTM E336
9.47	normalized noise isolation class (between rooms)	NNIC		dB	Normalized to $T_{40} = 0.5$ (See ASTM 336)



DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
WASHINGTON, D.C. 20590

JUL 3 1979

Mr. Henry E. Thomas
Director, Standards & Regulation
Division
ANR-490
Environmental Protection Agency
Washington, D.C. 20460

Dear Henry:

I am enclosing four copies of the DOT response to the proposed railroad noise emission regulations. As you are probably aware, the original document was hand delivered to the EPA document facility at 401 M Street in order to meet the time frame established in the notice.

If additional copies or other information can be provided, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Lawrence I. Wagner'.

Lawrence I. Wagner
Attorney Advisor

Enclosure

22ND ANR-490

9 JUL 79 10:02



OFFICE OF THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

JUL 2 1979

Rail Carrier Docket ONAC-79-01
U.S. Environmental Protection Agency
Office of Noise Abatement and
Control (ANR-490)
Washington, D.C. 20460

Dear Sirs:

The Department of Transportation (DOT) is vitally concerned with the preparation and issuance of Railroad Noise Emission Standards as prescribed by the Noise Control Act of 1972 (P.L. 92-574). The statute recognizes the appropriate concern of DOT in this matter by requiring (in section 17) that the Administrator of EPA consult with the Secretary of Transportation prior to promulgation of the standards. The views of the Department are to be obtained not only regarding "safety and technological availability" but also regarding "the cost of compliance" with such standards.

It is particularly toward this question of the cost of compliance that the Department wishes to direct its comments; and to recommend related changes in the regulation.

In summary, the Department believes the costs estimated by EPA for the proposed regulation are understated, as discussed below. Even given EPA's cost estimates, EPA's cost/benefit analysis (Appendix L of the Background Document) indicates that approximately 85 percent of the identified health and welfare benefits could be achieved at slightly more than half the cost of compliance if Option 3 (70 Ldn for all yards) were selected instead of the proposed Option 4 (70 Ldn for all flat yards within three years, and 65 Ldn for hump yards within six years). We believe it is unwise to double the cost of the regulation in order to gain such a relatively modest increment in benefits, particularly in light of the current economic conditions of the rail industry. It should also be noted that selection of Option 3 would make railroad noise levels comparable to those currently regulated for the highway mode and contained in 23 CFR Part 772. Finally the selection of Option 3 would avoid adoption of a regulatory provision that would, by virtue of the additional

\$40 million in capital costs associated with lower noise levels in a hump yard, serve as an economic disincentive for railroads to use the more efficient and cost effective hump yard facilities.

One example of cost under-estimation relates to locomotive noise. Examination of the available noise measurement data indicates that locomotive noise accounts for the largest percentage of acoustic energy of any source in the yard. It, therefore, has a marked influence on Ldn, which is essentially an energy-average noise descriptor. Consequently, in small yards, with limited trackage, even idling locomotives can cause the receiving property standard to be exceeded if located near a yard boundary even though these locomotives comply with EPA locomotive standards. This situation may result in a major increase in the number of locomotives that will require installation of mufflers and cooling fan modifications, compared to the number used in EPA's cost estimates. The increased number of locomotives needing retrofit would result in significant out-of-service costs for locomotives that EPA has not accounted for in assessing the cost of this regulation.

Turning to some specifics of the proposed regulation, EPA proposes an emission standard for refrigerator cars of 78 db at 7 meters in 3 years. Compliance with this provision will necessitate the installation of mufflers and sound-absorptive materials. EPA proposes that this retrofit program be completed within a 2-1/2 year period and indicates that this work could be done during the normal maintenance cycle for the refrigeration units. Based on the information available to the Department, the normal maintenance cycle for this equipment is approximately six years. Consequently, if these cars must be retrofitted within the EPA proposed time period, it will be necessary to remove these cars from service for the specific purpose of retrofitting with the attendant imposition of significant out-of-service costs. This analysis is also reflected by the Background Document in which EPA states that retrofit of refrigerator cars will take up to five years in order to avoid operating disruptions.

Accordingly, we recommend that, at the minimum, EPA make the effective date requirement consistent with the inspection provisions contained in the FRA Railroad Freight Car Safety Standards, 49 CFR Part 215, in order to avoid such out-of-service costs.

It should also be noted that trailers and containers on flatcars are equipped with similar refrigeration units and are more significant contributors to rail yard noise than refrigerator cars. The problem of yard noise caused by these truck related units is not addressed by this regulation and accordingly we recommend that EPA provide a mechanism for excluding these noise emissions from any determination of whether a facility is in compliance with these standards instead of placing a burden of compliance on a yard operator who is handling these unmuffled units.

The Department is also concerned over the omission of "out-of-service" costs in the cost analysis of the proposed retarder standard. The Department has supplied data to EPA which indicates that some hump yards are physically constructed in such a manner that the application of barriers, to control noise emissions from the retarders, may require redesign of existing hump yards. The costs, associated with taking a portion of such a facility out of service to accommodate relocation of tracks, would be significant and would include such costs as track construction, land acquisition or reduction in yard capacity, and disruption costs while such work was being performed.

In part because of these costs, we recommend that the requirement of a 30 meter measurement distance for retarders be amended, setting the noise level at the receiving property line, as is the case for the overall yard noise standard. We also recommend that the standard not apply when outside noises dominate or when surrounding land use is undeveloped again as in the case for the overall yard noise standard.

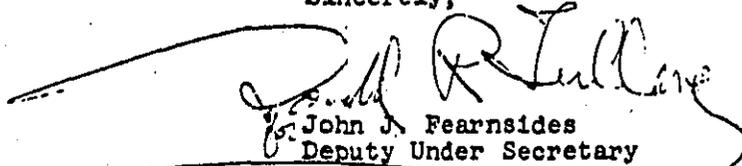
Regarding car coupling, based on the measurement data in the Background Document, it appears that car coupling speeds just slightly above 4 mph will violate the proposed noise limit. Therefore, the Department does not agree with the EPA contention that the car coupling standard imposes no additional costs because it "codifies existing general practice". The Department's review of the material furnished to us regarding the EPA survey of car coupling practices of major railroads does not convince us that the 4 mph car guideline is strictly or universally adhered to in the industry. For example, close to 20 percent of the respondents cited the applicable operating rule as "take proper precaution to prevent damage" or to "couple so as to avoid injury to persons or damage to property." Another 20 percent claimed adherence to the guideline by verbal instruction, but without its incorporation as an operating rule. Finally, close to seven percent of the respondents stated that slightly higher than 4 mph coupling speeds were permitted on their railroads, with speeds of up to 7 or 8 mph allowed for empty cars.

The Department contends further that it is difficult to consistently achieve the optimal speed of 4 mph and at least one study has shown that more than 70 percent of coupling occurs at speeds higher than 4 mph. Additionally, EPA has not considered other factors in their measurement program which also affect car coupling speeds. For example, although both loaded and unloaded cars were tested, consideration was not given to the type of load and different car weights. Other important parameters are the effects of car type, date of manufacture, track conditions and gradient, mechanical conditions affecting the rollability of the car, foreign substances on the wheels and the retarders, and human factors in speed control.

In view of these facts, the Department believes that EPA has underestimated the cost of the proposed car coupling standards. We recommend that the coupling operation standard apply at the receiving property line and be modified to correspond with a coupling speed of 6 or 7 mph, or another level which reflects the distribution of expected coupling speeds above 4 mph that are likely to occur.

Enclosed are additional, more detailed views, prepared by the Federal Railroad Administration, regarding specific provisions of the proposed regulation and regarding the Background Document.

Sincerely,



John J. Fearnside
Deputy Under Secretary

Enclosure

Enclosure

GENERAL COMMENTS

Enforcement

The Department equally encourages local and State participation in enforcement of these Standards. However, we are also concerned that such efforts are in keeping with the spirit and the statutory intent of the Noise Control Act in order to minimize any interference with the flow of interstate commerce. In other words, local and State regulation of the railroads must be identical not only to the EPA Noise Emission Standards, but also to the forthcoming FRA Compliance Regulations. In view of the fact that different compliance procedures could prevent uniform application of the standards to rail facilities, the Department strongly believes that State or local officials must follow the same rules as Federal personnel.

The Department urges EPA to incorporate the above in the discussion on Enforcement in the preamble to these rules. Only then can we be assured that State and local participation will maintain the national uniformity of enforcement and compliance effort required by the Statute.

Wheel/Rail Grinding. The statement in the preamble that Federal Railroad Safety Regulations require wheel and rail grinding is not accurate. Although compliance by the industry may result in grinding, FRA regulations do not specifically require this practice.

Reporting and Recordkeeping Requirements

Additional recordkeeping requirements should be anticipated as a result of FRA enforcement regulations or those promulgated by State and local jurisdictions enforcing these Standards. These costs are quantifiable and would include such items as documentation of noise surveys, status of muffler retrofit on refrigeration cars and locomotives, track construction, and operational restrictions.

Specific Comments on the EPA Proposed Interstate Rail Carrier Operations Standards

Section 201.1 Definitions

(l) Equipment. The term "special purpose equipment" is defined in this Section even though it is not used in the standard. Its inclusion is also inconsistent with the statement in the preamble that specific noise limits have not been set for the use of this equipment in maintenance-of-way work situations.

(kk) Receiving Property. Receiving property standards should be restricted to residential property or similar to the definition used by the Department in its Procedures for Abatement of Highway Traffic Noise and Construction Noise, 23 CFR Part 772. Also, the flexibility of a railroad

would be limited by requiring them to reduce noise levels to those residences located on their property rather than availing themselves of other options.

Section 201.10 Applicability

EPA's analysis in the Background Document focuses on the identification of over 4,000 yards in the contiguous 48 States that meet the criterion of serving as the interchange or terminal point of rail cars and the trains which they form. This was based on the Stanford Research Institute (SRI) report prepared for the Department entitled, "Railroad Classification Yard Technology," (FRA/ORD-76/304). It appears that EPA's intent is to apply the proposed noise limits only to operations and facilities in these yards as well as the identified automatic hump class yards and not operations involving railroad equipment (idling locomotives or refrigerator cars) located on a spur or branch line.

EPA's intention to exempt main AND branch-line rights of way should be clearly stated in this Section. DOT suggests that EPA use as a reference point for applicability those specific facilities identified by the SRI index. Periodic updating of that index would then suffice to reflect any changed conditions occurring subsequent to the compilation of the SRI data.

Section 201.14 Standard for Mechanical Refrigerator Cars

The Department has the following specific comments concerning EPA's proposed noise limits for mechanical refrigerator cars:

Applicability. EPA indicates, in its background material distributed with the NPRM, that truck trailer refrigeration units placed on flat bed rail cars are not covered by these regulations. However, this intention is not repeated in this Section, nor in the preamble to the NPRM. Assuming that these standards do not apply to truck trailers, these units should not be included in the overall yard noise measurement, and the regulatory language should directly reflect this fact.

Control Technology. EPA states in the preamble that refrigerator car noise can be reduced by the use of a better muffler for the diesel engine and the application of sound-absorptive foam. However, there is not sufficient data supplied in the Background Document to enable the Department to assess the validity of this claim. In particular, the phrase, "requires quieting" used in the Background Document needs to be quantified.

DOT is concerned that the application of available muffler technology may not be totally successful in reducing refrigerator car noise to the EPA proposed limit.

According to the EPA's proposed measurement procedures, the limit of 78dB at 7 meters is to be measured on the "A" scale. However, the authors of a DOT-TSC report, "Diesel-Powered Heavy-Duty Refrigeration Unit Noise", which focused on noise measurement and muffler application on trailer mounted units, concluded that although total refrigeration noise may be reduced with muffling, the "A" scale noise level reduction was not significant. This was because the diesel engine's fundamental frequency amplitude reduction is masked in the "A" weight network attenuation. Although the DOT report dealt with trailer mounted units, the conclusions reached appear to be applicable to refrigerator cars as well.

201.17 Standards at Receiving Properties

The Department, as requested by EPA during the drafting of this NPRM, furnished a list of "technical hot-spot" yards for further noise testing. Selection of these yards was based on the criteria specified by EPA--special topographical restrictions such as the location of a yard in a valley

with residences on surrounding hills, or conditions where noise sources, not amenable to control are in close proximity to the receiving property. Although detailed site characterization or acoustical analysis was not involved in this study, it is interesting to note that, based on the EPA Railroad Yard Noise Measurement Data, measured Ldn levels both at and inside the railroad property line were generally higher for these yards than the others studied by EPA. Our concern is that the proposed receiving property standard does not recognize these unique situations. This becomes especially significant when considered in light of the waiver procedures of the Noise Control Act which do not give the EPA or the Department the alternative of issuing waivers of compliance with these standards. Accordingly, it may be appropriate to establish an alternative limit for those yards which meet specified topographical criteria similar to those described above.

The EPA data base for Ldn variation does not account for seasonal effects. As the majority of the yard measurements were performed in a period of January to August, the standard may not account for increased activity levels during the harvest season. A provision for seasonal variation should also be incorporated in the receiving property standard to allow for these temporary high noise levels.

Noise Level Descriptor. The Department objects to the use of Ldn as the noise descriptor for overall yard noise. We are mainly concerned with potential compliance difficulties and excessive costs involved when this descriptor is mandated. Receiving property noise levels, measured in accordance with Section 201.33 will be very difficult to substantiate considering background noise and the through train exclusion. Although the proposed equivalent hourly Leq values are useful for determining instances of non-compliance, oftentimes a complete 24-hour measurement will have to be performed (for those instances where the one hour measurement exceeds the specified level).

The level of effort and the cost involved to obtain a 24-hour Ldn measurement is not warranted for either the yard operator or enforcement official. In our opinion, this regulation could be simplified a tremendous amount without sacrifice to the public health and welfare by the use of a decile level (L10) or some such time statistic. This concept is presently incorporated in other Departmental noise regulations such as the Procedures for Abatement of Highway Traffic Noise and Construction Noise, 23 CFR Part 772. The benefits are quite substantial for measurement procedures - a sound level meter with suitable timing devices would be sufficient to determine compliance with a

L10 standard. A manual override button could also be used to preclude recording noise during the intrusion of identifiable noise from non-railroad operations. Ldn determination, on the other hand, requires complex measurement techniques normally associated with detailed acoustical analysis. In addition, as identified in the Background Document, minimum equipment costs are \$10,000 with an attendant high cost for data analysis, exclusion of non-railroad noise, and verification of railroad dominance or non-dominance.

The Department maintains it is possible to correlate measured Ldn values at different railroad yards with L10 values without a sacrifice in accuracy. A reliable relationship can be made between the proposed Ldn criteria and time criteria such as L10. The correction only becomes poor when the noise is dominated by very loud and brief duration events, such as car impacts and retarder squeals. However, these events would be covered if the source standards proposed in Sections 201.15 and 201.16 are retained.

The use of Ldn as a noise level descriptor could severely impact those yards that operate on a 24-hour basis and prevent capacity increases in those yards

that do not currently have sufficient demand to justify 24-hour operation. This could be an impediment to the increased use of coal for power production as an example. Also, the 10dB night time differential inherent in the Ldn calculation is not a fully accepted criteria.

Section 201.22 Measurement Instrumentation

The "fast" response is not appropriate for refrigerator car measurements as it imposes an unnecessary degree of variability to the measurements. This response mode can produce levels up to 3dB higher than would be measured under calm wind conditions (within the requirements of Section 201.25) even with use of a windscreen. Furthermore, this mode is inconsistent with technical practices today where most noise data is recorded and processed by computer which results in averaged data. The average value of the "slow" response more accurately measures the true noise output since transient noise may be generated by other sources.

The Department also does not not agree with the specification of Type 1 instrumentation. While the specifications for Type 2 meter accuracy are less stringent than those for Type 1 meters, the cost of a Type 2 meter is about half that of a Type 1 instrument. This additional cost will increase the railroads' monitoring expenditures and will also undoubtedly influence State and local noise authorities

who are considering the enforcement of these standards.

Although potential errors in the Type 2 instrumentation when measuring high frequency free field sound may be fairly large, the increased accuracy of Type 1 instrumentation is counterbalanced by the estimation procedures outlined in Section 201.33 to determine non-railroad sound levels.

Section 201.25 Acoustical Environment, Weather Conditions, and Background Noise

A wind speed direction should be specified in addition to the wind speed. Wind speed increases with elevation and may enhance propagation in down wind direction. Accuracy obtained particularly with Type 1 instrumentation may be compromised.

Section 201.26 Procedures for the Measurement of Retarder Car Coupling, and Mechanical Refrigerator Car Noise

As proposed, the limits for noise emissions from retarders, mechanical refrigerator cars, and car coupling operations are based on specific measurement locations and are not dependent on receiving property usage as is the case for the overall yard standard. Therefore, it is possible that noise controls may have to be implemented for these sources in a particular yard with negligible population impact.

Additionally, these measurement distance specifications do not account for the presence of stationary rail cars or other fixed objects, and topographical considerations, outside the measurement location. These factors may be equally as effective as the EPA-required controls.

If these source standards are retained in the final rule, the Department suggests that the measurement distance requirements be modified by setting the noise limits at the receiving property line, as is the case for the overall yard noise standard. At the same time, these standards should not apply when outside noise dominates, or when surrounding land use is undeveloped.

We have the following additional comments in this Section:

Refrigerator Car Test

The term "throttle setting" is not really applicable to refrigerator car operation and is more appropriate for locomotive engine characterization. Rather, the load conditions of the car under test should be described. The previously referenced DOT-TSC report on trailer mounted refrigeration units demonstrated that a differential of up to 10dB can occur between what can be considered maximum and minimum load conditions. These load conditions were

determined by either opening or closing the trailer doors and setting the trailer compartment thermostat, and then noting the refrigeration unit compressor suction pressure.

Retarder Test

This Section requires that individual "retarder squeals" be measured to determine compliance with the standard. However, no description of the term "squeal" is furnished. This term should be clarified to eliminate individual interpretation of when a particular measurement is to be included in the minimum of 10 required.

Section 201.33 Procedures for Measurement

The method for substantiating the receiving property noise levels will be difficult with the exclusion of through trains and background levels. An alternate technique to that suggested by EPA would be to develop mathematical models for receiving property noise using single event noise levels for the various railroad noise sources to determine compliance. (A similar approach is used for airport noise regulation.) The model would also have the capability to analyze noise levels of new facilities and changes in yard capacity.

It could also be used to optimize operations for minimal noise impact on adjacent communities.

Microphone Location

The tolerance on the 2 meter measurement distance in Figure 3 (residential dwelling surface) would allow measurements to be made at 1.5 meters from a building side facing railroad property. These measurements could be higher (up to 3dB), because of acoustic reflections, than measurements made in a free field. In addition, noise from the adjacent community would be significantly reduced because of the barrier effect of the building. These compound effects could increase railroad costs for noise abatement without any significant reduction in the noise climate if community noise were dominant. To minimize this problem receiving property noise should be measured under free field conditions only.

BACKGROUND DOCUMENT

EPA should conduct a similar cost/benefit analysis for the individual source standards that was done for the overall yard standards. For example, it appears that no consideration was given to the effects to the impacted population of the limits selected nor the associated costs and whether an equivalent cost/benefit ratio could be achieved by the selection of alternative regulatory levels.

Switch Engine Noise

EPA's estimate of 6,500 switch engines should be revised to include road locomotives which, in some yards, perform virtually all of the "switching" function and thus, would have to be quieted as well. EPA identifies exhaust muffling and cooling fan treatment as the technology required to quiet switch engine noise. However, this contention merits further analysis. Mufflers are only effective at full throttle conditions where it is desirable to silence the exhaust frequency noise. At the lower throttle settings, the main contribution is mechanical noise rather than exhaust. The document should recognize the "low idle" option presently being offered by one locomotive manufacturer as an option for fuel savings purposes. This setting with its lower engine speed also achieves an attendant noise reduction.

The muffler costs shown in the EPA Background Document do not account for labor installation.

According to EPA, the options of shutting down or re-locating idling locomotives do not involve significant costs. This is not accurate since in many locations, during periods of cold weather, the units must be kept idling to avoid mechanical damage, and in some yards, track for storing idling locomotives will not be available unless new construction

is undertaken.

Appendix A

This discussion on Page A-1 concerning frequency of railroad operations should be deleted as it is not relevant to the proposed standard.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: July 2, 1979
SUBJECT: Region 10 Comments on the Proposed Revisions
to the EPA Rail Carrier Regulations
FROM: Deborah J. Yamamoto
Noise Control Representative
TO: William Roper, Chief
Surface Transportation Branch
Office of Noise Abatement and Control ANR 971

I have reviewed the proposed revision to the EPA Rail Carrier regulation and find our comments do not differ substantially from the memo from Donald P. Dubois, Regional Administrator to Edward Rousch dated February 16, 1979. A copy of that memo is attached.

In addition to the points outlined in that memo, I wish to offer the following comments.

A statement should be added under the Technology and Cost Section that if there are future technological innovations, more effective and less costly than present techniques which reduce railyard noise levels, they must be employed at the earliest possible date.

Also, the section, Procedures for Measurement (201.33) rules out buildings of three stories or higher of having any adequate means of measurement to assess their noise exposure. This is because it allows for measurement up to seven meters only, thus excluding all residences in three story or higher buildings from having any recourse to severe noise exposure from railyards.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

FEB 16 1979

Recommendation of Non-concurrence with Draft Railway Equipment and Facility Regulations Under Red Border Review

Donald P. Dubois
Regional Administrator

J. Edward Roush, Director
Office of Regional and Intergovernmental Operations

THRU: L. Edwin Coate
Deputy Regional Administrator

We are non-concurring with the proposed railroad equipments' facility regulations currently under red border review. We recognize there may be overriding considerations at the national level; our non-concurrence is therefore based on our concerns about negative impacts on the Region 10 noise program. Our objections to the package are summarized below.

1. The proposed regulations (both 24 and one-hour) are not protective of public health and welfare and are inconsistent with our national noise strategy.
2. Because they are totally preemptive, the proposed standards would prohibit one of our states (Oregon) from enforcing its own standards which are protective of public health and welfare. Enforcement actions taken by Oregon using their more stringent standards have not resulted in placing an unreasonable economic burden on the railroads in order to achieve compliance. We understand Illinois has also been enforcing more stringent standards.
3. The regulations will allow degradation in the noise climate around some existing railyards.
4. The draft regulation proposes a one-hour standard which is inconsistent with measurements made in Region 10 and by Regions 4, 6, and 8. These measurements were taken to provide data to support the regulation development. From our data, our worst one-hour level was within 5 dB of the 24 hour levels. The regulation proposes a one-hour daytime level 14 dB higher than the 24 hour level. We cannot see the justification for such a high one-hour level and recommend a more reasonable level be established based on real world measurements.

/s/ Donald P. Dubois

Yamamoto/mm 2/16/79

CONCURRENCES						
SYMBOL	294	5	DC			
SURNAME	YAMAMOTO	FEIGNER	HANSEN			
DATE	2/16/79	2/16/79				

EPA Form 1320-1 (12-70)

OFFICIAL FILE COPY

minneapolis

city of lakes

OFFICE OF CITY CLERK
LYALL A. SCHWARZKOPF, CITY CLERK
311 CITY HALL, MINNEAPOLIS, MINNESOTA 55415
PHONE: 348-2215

July 23, 1979

Rail Carrier Docket Number ONAC 79-01
Office of Noise Abatement and Control (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

To whom it may concern,

Enclosed is Resolution 79R-279 passed by the Minneapolis City Council on June 29, 1979 opposing the establishment in the Environmental Protection Agency Rail Carrier Docket Number ONAC 79-01 and concurrence in the objections raised by the Chief of the Minnesota State Noise Section. I have also enclosed the Draft by the Minnesota Pollution Control Agency.

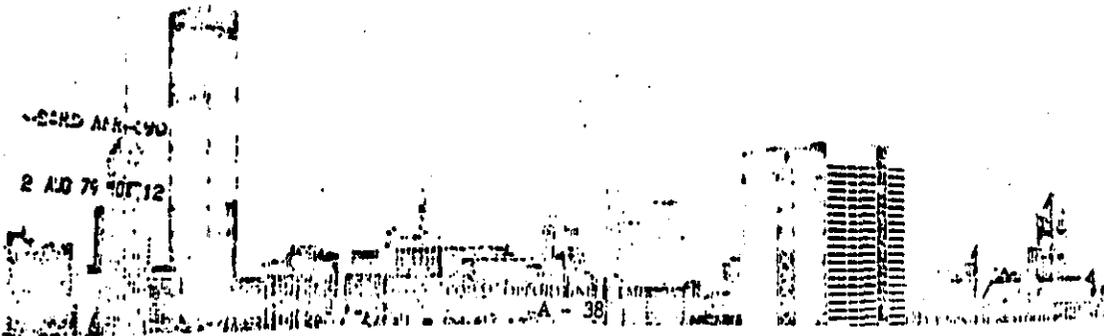
Sincerely yours,



Lyall A. Schwarzkopf CHC
City Clerk

Jt/lis

encl



D R A F T

D R A F T

June 12, 1979

Rail Carrier Docket Number ONAC 79-01
Office of Noise Abatement and Control (ANR-490)
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Sirs:

Staff of the Noise Pollution Control Section of the Minnesota Pollution Control Agency (MPCA) has reviewed the proposed "Noise Emission Standards for Transportation Equipment; Interstate Rail Carriers" 44 Fed. Reg. 22960-22972 (April 17, 1979), documentation supporting the proposed regulation, and the draft "Environmental Impact Statement for Proposed Revision to Rail Carrier Noise Emission Regulation" ("Draft EIS"), EPA 550/9-78-207 (February 1979), and offers the following comments for the record.

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1. Establishment of Health Standards

The proposed regulation 40 C.F.R. Section 201.17 clearly establishes "Standards at receiving properties." Such receiver, or ambient, standards are clearly not the "noise emission standards" mandated by section 17(a) of the Noise Control act of 1972, P.L. 92-574 (hereinafter the "Act"), and thus if adopted by the U.S. Environmental Protection Agency ("EPA") would exceed the Agency's statutory authority.

The distinction between the statutory authority to adopt emission standards as opposed to receiver standards is significant. If EPA adopts the regulations as proposed, it will establish for the first time health standards for noise pollution control. Congress has not given EPA that authority. In adopting the Noise Control Act of 1972 Congress specifically recognized in Section 1 that "primary responsibility for control of noise rests with State and local government." It was Congress' intent to leave the protection of health and welfare through enforcement of ambient standards to state and local government, while reserving to EPA in Section 17(a) of the Act the task of setting technology-based emission limitations "which reflect the degree of noise reduction achievable through the application of the best available technology, taking into account the cost of compliance." State and local governments may not under section 17(c) of the Act adopt any noise emission regulations which conflict with EPA's regulations. They may however, adopt

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receiver standards which do not conflict with EPA's emission regulations. Source and receiver standards can be enforced independently without conflict. A conflict arises only when one tries to attack a noise problem through hybridization of source and receiver regulations, as EPA is proposing in this case.

EPA itself has recognized publicly that it has no statutory authority to adopt receiver standards. In its document "Toward a National Strategy for Noise Control" (April 1977) EPA states at page 15: "EPA has no authority to regulate ambient noise levels". EPA's proposal to adopt receiver standards clearly exceeds its statutory authority under the Act. EPA is limited to establishing emission standards only and may not adopt the receiver standards as proposed.

2. Use of Ldn as Descriptor

Section 201.17 of the proposed regulation designates the proposed standards in terms of the Ldn descriptor. Use of the Ldn descriptor is ineffective as a tool to protect the health and welfare of people affected by railroad facility noise.

As a part of its justification for use of the Ldn descriptor applicable to a health standard, EPA cites its own publication entitled "Information of Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety", 550/9-74-004 (March, 1974) (hereinafter "Levels

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Document") for the proposition that "An outdoor Ldn value of 55dB is the level of noise EPA has identified as being protective of public health and welfare with an adequate margin of safety." 44 Fed. Reg. at 22965. In citing the Levels Document as support for the use of the Ldn descriptor EPA misrepresents the nature of the Levels Document. The Levels Document did not identify Ldn as an appropriate descriptor for health standards. It used as the descriptor the yearly average Ldn, which differs significantly from the Ldn. The proposed regulation is based on the Ldn and not the yearly average Ldn.

In 1974 the MPCA adopted receiver noise standards using the hourly L₁₀ and L₅₀ descriptors based on the A-weighting network and has had five-and-a-half years experience in enforcing and working with its standards. In the process of adopting and enforcing these standards we have found a total lack of information to support the use of any 24-hour or yearly average descriptor as applicable to health standards. EPA cannot support the use of the Ldn descriptor for this regulation.

3. Use of Levels Document as Support for Health Standards

As previously noted, EPA has cited the Levels Document as support for the health-based standards it proposes to adopt under 40 CFR Section 201.17.

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The levels Document was never intended to serve as the basis for a federal health-based noise standard. The Levels Document was prepared in response to a Congressional mandate under section 5(a)(2) of the Act to "publish information on the levels of environmental noise... requisite to protect the public health and welfare with an adequate margin of safety". (Emphasis added.) The document purported to identify noise levels for the protection of public health and safety but such levels were not adopted by EPA for any regulatory purpose. They were not subject to the public scrutiny afforded regulatory actions. If EPA goes forward with adoption of the proposed receiver standards it must be able to support such standards with documentation that will stand up under such public scrutiny. In the opinion of the MPCA the Levels Document does not support the adoption of a federal health-based standard.

4. Car Coupling Operations Standard

The standard established by section 201.15 for car coupling operations are in effect impulsive noise standards. Such standards lack support because EPA has not yet identified impulsive noise levels "requisite to protect health and welfare with an adequate margin of safety" as required by section 5(a)(2) of the Act. Little information is readily available on the subject. To our knowledge, work done for EPA by Wyle Labs in 1976 is yet to be published. EPA must identify safe levels before they are adopted as standards.

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5. Difficulty of Enforcement of Proposed Standard

In addition to exceeding the statutory authority of the EPA and in addition to using an unsupportable descriptor, the proposed receiver standards if adopted will be unenforceable, resulting in their being ineffective to protect persons adversely affected by railroad facility noise.

EPA, although recognizing that "the major enforcement activity will need to be conducted by State and local agencies if the regulations are to be effective" (44 Fed. Reg. at 22967), has tied the hands of enforcement officials by the very terms of the regulation itself. Proposed 40 CFR section 201.31 specifies that measurements must be obtained using an instrument that does not presently exist. An integrating sound level meter or instrumentation system, that meets all of the requirements of American National Standard (ANSI) for sound Level Meter: 51.4-1971, Type 1, does not now exist for the purpose of measuring Ldn. Should such an instrument become available it is likely to be exorbitantly priced. It will be required to be used for 24 hours stints in conjunction with computer programs not presently being used for enforcement purposes.

Background information to the proposed regulation does not support the need for Type I instrumentation. Even though it is fun to play with such equipment in the laboratory and discuss the significance of .1 decibels over coffee breaks, few discrepancies

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are found between Type I and Type II instrumentation in the real world due to the frequency components of environmental noise sources. Railroad facilities are no exception. The economic impact of requiring Type I meters for State and local programs cannot be taken lightly. The need for such arbitrary requirements must be thoroughly analyzed and documented.

For enforcement actions to survive court tests, qualified technicians will have to be present during any data gathering effort. The 24-hour monitoring period required to enforce a standard using the Ldn descriptor will drain the staff resources of State and local programs in a very short period of time. Although the proposed 40 CFR section 201.17(b) provides for enforcement of the alternative Leq descriptor, the hourly 84 Leq for daytime and 74 Leq for nighttime periods are so grossly inadequate as standards that they are meaningless.

In addition, enforcing the proposed regulation requires that the data be adjusted using computer programs not commonly used for enforcement ^{Purposes} ~~proposes~~. For example, the "indigenous" noise level prediction [$22 + 10 \log (\text{population density})$] is based on regression analyses of a minimum data base. It is our opinion that the concept overestimates levels for background noise in Minnesota neighborhoods. Similarly, the "calculation of day-night levels resulting from civil aircraft operations" it is not an easy task for specific daily operations since it is designed for an average yearly Ld₂₄. This implies a requirement

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of having an individual present at the control tower of the nearby airport, for 24 hours, charting the flight tracks for the day in question. (EPA should try to do such a feat once for the nearby National airport to assess its reasonableness.) When it comes to highway noise prediction the ~~choice~~^{choice} is made of a model (Mod 04, FHWA-RD-77-18) that is well known to "break down" for arterial and local traffic conditions.

Let us assume that revised ANSI standards allow for the manufacturing of the Type I integrating sound level meter specified and that all the money in the world becomes available to State and local programs to: a) buy the equipment, b) have staff available to monitor the railyard and the nearby airport, c) obtain and implement the computer programs, d) hire or contract with computer operator. With all of those obstacles out of the way, all that the railyard operator has to do to protect himself from any enforcement action is to ring a bell or blow a whistle (to which the regulation does not apply - see 44 Fed. Reg at 22963) constantly and he has sufficiently invalidated the measurement that a violation of the standard could not be proved.

EPA's decision not to regulate maintenance of way equipment (see 44 Fed. at 22963) raises the same issue: How is the receiver limit enforced if one of those devices is operational in the yard when monitoring of the facility is being conducted?

Section 201.15 of the proposed regulation provides that "[T]

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he car coupling requirement can be alternatively met by demonstrating that the car coupling operations are not performed at speeds greater than 4 miles per hour at point of impact." This alternative should be dropped from an enforcement standpoint. As determined by EPA in the testing phase of the development of this standard, noise produced by car couplings depends mainly on the loaded condition of the cars and the speed of coupling. The speed of coupling itself is highly dependent on the care exercised by the yard crews. Knowledge that enforcement testing is being done (present test requirements does not allow for the enforcer to remain incognito) will result in 100% compliance under testing conditions since 4 mph can be easily achieved and under observation cars can be made to couple as gently as two sticks of butter. The easy avoidance of finding a violation could easily make this standard meaningless in protecting the public. Section 201.26 of the proposed regulation specifies height and distance in measuring car coupling noise. For effective enforcement of the car coupling standard, measurement should be able to be done at all distances and elevations where a problem might exist. The requirement of section 201.26 that energy averages of sound levels from at least ten couplings shall take place at a specified distance and elevation makes enforcement of this standard meaningless.

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In summary, the MPCA's evaluation of the regulation as proposed indicates that significant enforcement difficulties, and in many cases impossibilities, will result from promulgation of the regulation in its present form, especially in light of the fact that EPA intends for the enforcement burden to fall on State and local governments.

6. EPA's Approach to Adopting Standards

Although the foregoing comments have related generally to specific sections of the proposed regulation, the MPCA wishes to comment upon the approach EPA has taken with respect to compliance with the order of the U.S. Court of Appeals for the District of Columbia which mandated adoption of regulations for railroad facilities.

A reading of the proposed regulation and the supporting documentation shows that EPA has approached the task of adopting railroad facility regulations as if the Act specifically authorized receiver standards instead of emission standards. In three instances EPA actually ~~p~~roposes the kind of standards authorized by the Act: sections 201.14, 201.15 and 201.16 propose emission standards for refrigerator cars, coupling operations and retarders. Rather than treating the emission standards as the norm from which the receiver standards depart, EPA takes its bizarre approach a step farther by justifying the emission standards of section 201.14 - 201.16 as a necessary

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exception to the rule. In its "Background Document for Proposed Revision to Rail Carrier Noise Emission Regulation". EPA explains why these three sources should be regulated differently than other railroad facilities, using an emission limitation rather than the L_{dn} receiver standard. The document states:

The L_{dn} descriptor is inadequate for characterizing annoyance from certain types of sources. For example, sources such as retarders and refrigerator cars which have large, pure-tone components can be especially annoying even when they are not affecting ambient levels appreciably. Likewise, impact noise from car coupling can be a major cause of annoyance while contributing little to L_{dn} .

This approach is regulating railroad facilities--applying a 24-hour L_{dn} for some sources and an L_{max} for others--is not only confusing but shows EPA's lack of belief in the L_{dn} standards as an effective means of protecting the public health. EPA must confine itself to adopting the emission standards authorized by the Act and leave the establishment and enforcement of ambient standards to State and local officials.

The MPCA believes that the most troubling aspect of EPA's approach to adopting a railroad facility regulation is that the regulation proposed seems to be deliberately designed to be

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outside EPA's statutory authority and totally ineffective to regulate railroad facilities. Remarks by an EPA consultant at a November 2, 1977, meeting in Chicago at which the writer was present, along with EPA staff and consultants and other State and local officials, went so far as to suggest that EPA's course of action should be to adopt regulations that would not withstand a challenge as to their effectiveness. It appears that such advice was heeded. EPA has previously stated its desire to leave the regulation of railroad facilities to state and local governments. It proposes these regulations under a court order which attempted to ascertain Congress' intent in enacting section 17 of the Act. The MPCA urges that EPA seek from Congress a clarification to the Act relieving EPA of the court imposed duty of regulating railroad facilities. Such a Congressional clarification would be far better than the proposed course of action in which EPA will adopt ineffective standards which will tie the hands of State and local noise regulatory agencies from giving the public relief from railroad facility noise.

7. Draft EIS

Staff of the MPCA has reviewed the Draft EIS and finds it to be inadequate in the following specific respects:

- a) It does not discuss why stricter limits were not considered by the EPA for new facilities.

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- b) It ignores any adverse impact that ethylene glycol runoffs from retarders might have on water quality.
- c) It does not address the impact of idling locomotives (a large source of noise complaints) on energy consumption.
- d) It is well known that noise has a detrimental effect on property values. The economic impact to receiving properties left unprotected by the regulations was not discussed or even mentioned. The economic impact to industry in achieving the specified levels, on the other hand, was thoroughly investigated.

However, in general terms the Draft EIS fails to be what the National Environmental Policy Act envisions: a concise, free-standing document which is helpful to the decisionmaker in arriving at a conclusion on the environmental impacts of the proposed action. Instead it is a six-page nod to the concept of environmental impact analysis. The conclusion that the Draft EIS reaches that "compliance with the proposed standards for existing yards is expected to provide an environment free from annoying levels of railroad noise for about 830 thousand of the 4 million exposed" ought to be stated in the converse to convey the true

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impact of the proposed regulation. It should read: "The proposed EPA regulation will prevent 3.170 million people from obtaining relief from railroad noise by the un-authorized pre-emption of State and local programs from implementing meaningful noise controls on rail yards."

Sincerely,

^{?E,}
Alfonso E. Perez,^A Chief
Noise Section
Division of Air Quality
Telephone: (612) 296-7340

A PRELIMINARY CRITIQUE
OF THE
U.S. ENVIRONMENTAL PROTECTION AGENCY'S
PROPOSED RAILYARD NOISE REGULATION

SUMMARY: The following is a preliminary critique of the U.S. Environmental Protection Agency's proposed noise emission regulations for facilities and equipment of the nation's interstate rail carriers as published in the Federal Register on Tuesday, April 17, 1979. These comments have been drafted by a special NANCO review committee made up of John Hector, Bob Hellweg, Jerry Jensen, Jack Swing and Jesse Borthwick. They do not necessarily reflect the views of any State or local agency nor do they represent a formal position by NANCO. They have been prepared in an effort to stimulate and encourage review of the regulation by all interested persons.

ISSUE: Property line standards versus source standards.

COMMENT: The committee feels that EPA should not establish property-line type noise emission standards for railyards or any other sources of environmental noise. Any property-line standards promulgated by EPA would have to be based on worst case or "least common denominator" situations since there are no variance provisions in the Noise Control Act. We don't feel that a standard based on the worst case would be in the best interest of the public health and welfare. Such standards would only serve to legalize existing levels of noise and in the case of railyards actually allow significant increases in noise emissions at yards which are currently "quiet."

Recognizing the restrictions that would be placed on establishing national property-line railroad noise emission standards and the uniqueness of local acoustic environments, the committee would recommend the adoption of receiving property criteria to aid in determining when source controls should be imposed. The following scenario is suggested:

- (1) EPA should establish receiving property noise impact criteria which when violated would constitute an impact on the public health and welfare and therefore be considered excessive. Such criteria should be established without consideration for cost of compliance or technology requirements. We would recommend L_{DN} 55 dBA be adopted as the criterion for longterm steady state noise exposure (based on information published by EPA) and that maximum hourly Leq 's of 60 dBA (day) and 50 dBA (night) also be established to allow shortterm monitoring. These hourly levels are recommended based on the need to protect against communication interference and sleep interference, and are supported by (i) the data presented in EPA's Appendix V which shows the greatest difference between maximum measured hourly Leq values and L_{DN} values being 4.5 dBA, indicating that the daytime hourly Leq should be set no higher than 5 dBA above the L_{DN} value; and (ii) the need for a 10 dB nighttime penalty. A third set of criteria needs to be established as a measure of intrusive noise, perhaps a maximum $L_{MAX}-L_{50}$ difference or some similar measure.
- (2) Once the above criteria are established Federal, State and local enforcement officials can determine where noise impacts exist. When the noise emissions from a given railyard are found to be in violation of the criteria at a receiving noise sensitive site, the next step is to determine whether the noise is necessary. We would define unnecessary noise as any noise which is excessive (violates the criteria) and which has not been controlled using best available technology (BAT) as identified by EPA source standards which includes

administrative controls.

- (3) A railyard which is found to be generating excessive and unnecessary noise would be required to bring its noise within the criteria or comply with all EPA source standards through the application of BAT and administrative controls.

This scenario would result in noise abatement only at noise sensitive sites as opposed to requiring abatement on all sources industrywide, thereby reducing drastically the economic impact on industry. We feel it would also encourage the use of administrative controls including cooperation with local planning officials to prevent encroachment and encourage compatible redevelopment.

ISSUE: Through train noise emissions

COMMENT: We feel that through train noise has not been adequately addressed. Existing source standards fail to protect the public health and welfare. We strongly urge that standards for rolling stock be reexamined.

ISSUE: Best Available Technology definition

COMMENT: Best Available Technology should include administrative control. Control considered workable and reasonable should be published by EPA for use by the railroads and enforcing agencies.

ISSUE: Car coupling noise standards

COMMENT: We recommend the car speed criteria be dropped since it will only serve to complicate enforcement. As currently written the regulation would require the monitoring of car speed to document it moving less than 4 mph in order to fully support a violation.

We also recommend that the standard be reduced from 95 dBA to 90 dBA at 30 meters. A minimum of 10 readings all within 10 dBA of the maximum reading should be required. It appears that the 90 dBA standard could be reached through speed controls, especially when the energy averaging of 10 readings is considered.

ISSUE: Retarder noise standards

COMMENT: We support EPA's application of 12 ft. barriers with absorptive lining as BAT. We support the 90 dBA standard but suggest that the measurement criteria be amended to require a minimum of 10 readings, all within 10 dBA of the maximum reading, be used in arriving at the energy average.

ISSUE: Refrigerator car noise standard

COMMENT: The background documentation presents insufficient data to support a review of the standard. However, it does not appear that the use of electric service for compressors as opposed to diesel-generated service was given adequate, if any, consideration. This control approach is currently being used in Orange County, California.

ISSUE: Acoustic environment degradation

COMMENT: The regulation should be amended to include provisions limiting degradation of the acoustic environment surrounding railyards that currently have low level noise emissions.

ISSUE: Land use planning

COMMENT: All railyards should be required to provide noise contours to local planning departments showing current and future noise impact zones, in order to encourage compatible land use planning.

ISSUE: State and local enforcement of the regulation

COMMENT: The measurement criteria are extremely complex and will result in little, if any, enforcement by State and local noise control agencies. We know of no agency that is willing to participate in the enforcement of the regulation as proposed. Even if acceptable standards and measurement procedures are promulgated by EPA, State and local governments will be required to adopt identical regulations before they could become involved in enforcement. This process could prove to be a lengthy if not impossible task in many jurisdictions. Furthermore, we feel that without financial and technical support (training enforcement officials, providing legal advice, equipment, technical consultation, etc.), no State or local noise control agency will be able to successfully enforce against a major rail company.

ISSUE: Measurement criteria

COMMENT: The measurement criteria as proposed are too complex to be considered workable. Modeling out all non-railyard noise sources and through trains as proposed using sophisticated techniques such as the TSC Highway Noise Prediction Method is asking too much. There are currently no integrating sound level instrumentation systems that meet all ANSI Type I specifications due to the lack of specifications for digital read-out. Those that meet the Type I accuracy specifications are overly expensive and are therefore rarely found in the equipment inventories of State and local noise control programs. Although we recommended earlier against the use of L_{DN} or Leq for enforcement, if L_{DN} and Leq metrics are adopted, a simple statistical measurement procedure using Type II sound level meters and a method of calculating Leq should be established.

ISSUE: EPA Region X Recommendation of non-concurrence

COMMENT: The committee completely concurs with EPA Region X Administrator Dubois' comments as outlined in attached letter.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 10

DATE: FEB 16 1979

SUBJECT: Recommendation of Non-concurrence with Draft Railyard Equipment
and Facility Regulations Under Red Border Review

FROM: Donald P. Dubois
Regional Administrator

TO: J. Edward Roush, Director
Office of Regional and Intergovernmental Operations

THRU: L. Edwin Coate
Deputy Regional Administrator *L. Edwin Coate*

We are non-concurring with the proposed railroad equipments' facility regulations currently under red border review. We recognize there may be overriding considerations at the National level; our non-concurrence is therefore based on our concerns about negative impacts on the Region 10 noise program. Our objections to the package are summarized below.

1. The proposed regulations (both 24 and one-hour) are not protective of public health and welfare and are inconsistent with our national noise strategy.
2. Because they are totally preemptive, the proposed standards would prohibit one of our states (Oregon) from enforcing its own standards which are protective of public health and welfare. Enforcement actions taken by Oregon using their more stringent standards have not resulted in placing an unreasonable economic burden on the railroads in order to achieve compliance. We understand Illinois has also been enforcing more stringent standards.
3. The regulations will allow degradation in the noise climate around some existing railyards.
4. The draft regulation proposes a one-hour standard which is inconsistent with measurements made in Region 10 and by Regions 4, 6, and 8. These measurements were taken to provide data to support the regulation development. From our data, our worst one-hour level was within 5 dB of the 24 hour levels. The regulation proposes a one-hour daytime level 1 dB higher than the 24 hour level. We cannot see the justification for such a high one-hour level and recommend a more reasonable level be established based on real world measurements.

[Signature]
Donald P. Dubois

RESOLUTION 79R-279

By Alderman Kaplan

Opposing the establishment of proposed regulations in the Environmental Protection Agency Rail Carrier Docket Number ONAC 79-01 and concurrence in the objections raised by the Chief of the Minnesota State Noise Section.

Whereas, noise has a detrimental effect on property values; and

Whereas, local government would be required to enforce the proposed Environmental Protection Agency's Interstate Rail Carriers Noise Regulations; and

Whereas, the City of Minneapolis feels these proposed receiver standards, if adopted, would be impossible to enforce; and

Whereas, the City of Minneapolis would be pre-empted from enforcing standards which it believes are protective of public health and welfare;

Now, Therefore, Be It Resolved by the City Council of the City of Minneapolis:

That the City of Minneapolis, by passage of this Resolution, goes on record as being strongly opposed to establishment of regulations as proposed in the Environmental Protection Agency Rail Carrier Docket Number ONAC 79-01. The City of Minneapolis also concurs with the specific objections raised in the comment document as written by the Chief of the Minnesota State Noise Section.

Passed June 29, 1979. Louis G. DeMars, President of Council.

Approved July 5, 1979. Albert J. Hofstede, Mayor.

Attest: Lyall A. Schwarzkopf, City Clerk.



CITY OF CARSON

July 24, 1979

Henry E. Thomas, Director
Standards and Regulations Division
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Thomas:

In response to your letter of April 17, 1979, please be advised that on July 16, 1979 City Council concurred with the recommendation made by the City's Environmental Commission to adopt the Environmental Protection Agency's Proposed Revised and Expanded Noise Regulations; and request that EPA amend their regulations to provide for a 70 dB(A) ambient noise level for background sounds at the boundary of industrial zoned district. Permitting an ambient noise level in excess of 70 dB(A) to extend beyond the boundaries of industrial zones would not be consistent with the City's adopted Noise Element of the General Plan.

If the City of Carson can be of further assistance regarding the matter, please feel free to contact the Community Development Director, Richard K. Gunnarson, at 830-7600, extension 325.

Sincerely,


Kay A. Chlas
Mayor

DL:jkm

A - 58



ARTHUR K. BOLTON
ATTORNEY GENERAL

The Department of Law
State of Georgia
Atlanta

30334

132 STATE JUDICIAL BUILDING
TELEPHONE 656-3300

July 30, 1979

Mr. Henry Thomas
Director
Standards and Regulation Division
Environmental Protection Agency
Washington, D.C.

RE: Proposed Regulations Regarding Railroad Noise

Dear Mr. Thomas:

I have received and appreciate the proposed revised regulations regarding railroad noise which you have mailed to this office. This office will make no comment upon these regulations. However if you desire to consult with the appropriate officials in this state who administer the Georgia Noise Control Act of 1974, I would suggest that you contact Mr. Roger Justice of the Environmental Health Section, Georgia Department of Human Resources, in Atlanta, Georgia.

Sincerely,

L. JOSEPH SHAHEEN, JR.
Assistant Attorney General

LJSjr:ml



PUBLIC HEALTH AND MEDICAL SERVICES

MARGARET C. GRIER
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MAILING ADDRESS: P. O. BOX 358
SANTA ANA, CA 92702

July 31, 1979

Rail Carrier Docket (ONAC 79-01)
Environmental Protection Agency
Washington, D.C. 20460

SUBJECT: Review of Proposed Revision to Rail Carrier
Noise Emission Regulations (40 CFR, Part 201)

Gentlemen:

In response to a request from Henry E. Thomas, Director of Standards and Regulations Division, Office of Air, Noise and Radiation, EPA, dated April 17, 1979, the proposed noise emission regulation was reviewed. Our opinions are based on our past experiences associated with difficulties encountered in the enforcement of community noise control ordinances and several problems we anticipate in the enforcement of the proposed noise standards. It should be noted that the opinions expressed herein do not necessarily represent the policy or opinion of the government of the County of Orange.

The concept of a property line noise intrusion standard is generally a good criterion. However, the proposed revision promotes a "worst case" exposure standard. The proposed railyard and equipment standard of 70 Ldn, effective in 1982, appears to be much higher than communities consider acceptable. In order to protect the health and welfare of residents near these areas, it is recommended that the noise exposures should not exceed 65 Ldn by 1986. If airports can accomplish this task, then the railroads should also be able too. If railroad activities in certain facilities do not currently create noise intrusions greater than 65 Ldn, this regulation would grant the railroads a "license to make more noise" by permitting the noise level to rise to the proposed standard. To permit some flexibility in railroad operations, a maximum increase of 3 dB above today's exposure could be allowed until 1985.

The concept of permitting an entire 24 hour noise exposure of 70 Ldn to take place in a one hour period to obtain permissible 84 Leq is mathematically correct, but quite unrealistic. To carry this reasoning one step further, as an example, if all of the day's activities in a small switchyard occurred within a 6 minute period during the selected one hour monitoring period, the allowable exposure would be approximately 94 Leq for the 6 minutes, thus creating a noise exposure that is considered intolerable. A more realistic approach would be to adopt either a time-weighted (i.e. L10 per hour) exposure or to permit an increase of 5 dB above the Ldn standard for the hourly Leq.

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Rail Carrier Docket (ONAC 79-01)
Environmental Protection Agency
July 31, 1979
Page 2

A "baseline" noise inventory (including noise contours) for the various noise emission sources within a given facility should be prepared by the railroads to determine the noise impact upon persons living near railroads and to establish a priority system for noise abatement. This inventory should be updated periodically so that it could be used as a planning tool for local jurisdictions in the development of future land use compatibility criteria in cooperation with the railroads.

The definition of "railroad facility boundary" and "receiving property", Section 201.1 (jj) and (kk), needs further clarification and should include switching activities controlled by franchises or easements, e.g. tracks located on paved city streets in residential areas.

Section 201.26 (a) Refrigerator Car Test procedures are not adequately described. It appears that the concept was to require that each car be measured independently (7 meters from the track centerline). In actual practice, there are usually unattended groups of refrigerator cars on a siding with diesel engines operating generators to power the refrigeration units. Without cooperation of the specific railroad company involved, it would be impractical to attempt isolation of a single refrigerator car for measuring noise emissions and applying the refrigerator car standard. In addition, such uncontrollable noise sources would require application of the receiving property standard. This situation would result in a conflict of standards so nothing would be accomplished. Locally, one way we have reduced the noise 5-6 dB, without modifying the cars, is to use commercial power to drive the refrigeration units, thereby eliminating the noise of the diesel engine and generator.

Section 201.26 (b) Car Coupling Test measurements are limited to 4 miles per hour. This appears to be an unnecessary complication for completing an evaluation because the standard requires the noise measurements to be made at a distance of 30 meters from the track centerline while the speed is being measured. Locally this measurement can be made by using a special low speed "hand held" radar unit. These units are very accurate for "head on" measurements but are very inaccurate when measured at right angles to moving vehicles. A simpler and more accurate method of measuring coupling noise would be to take the average noise level obtained from 10 coupling operations using a peak reading meter and evaluating the data in terms of a permissible impact noise standard.

Overall, the proposed noise regulations appear to be very favorable to the railroad industry, with overly complicated measurement procedures requiring sophisticated noise monitoring equipment. Such validation for determining compliance would require highly trained persons, therefore restricting local jurisdiction activities in enforcing the proposed regulations.

Very truly yours,



E. G. Brickson, R.S.
Environmental Health Specialist
Division of Environmental Health

EGB/st

FROM: E. G. Brickson
Orange County Human Services Agency
Public Health & Medical Services
Division of Environmental Health
P.O. Box 355
Santa Ana, CA. 92702

1200 LINCOLN ST. SUITE 704
DENVER, CO. 80203
PHONE (303) 861-9090



NATIONAL ENVIRONMENTAL HEALTH ASSOCIATION

July 26, 1979

Rail Carrier Docket (ONAC 79-01)
Environmental Protection Agency
Washington, D.C. 20460

SUBJECT: Review of Proposed Revision to Rail Carrier
Noise Emission Regulations (40 CFR, Part 201)

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Rail Carrier Docket (ONAC 79-01)
Environmental Protection Agency
July 26, 1979
Page 2

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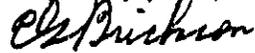
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Overall, the proposed noise regulations appear to be very favorable to the railroad industry, and with overly complicated measurement procedures requiring sophisticated noise monitoring equipment. Such validation for determining compliance would require highly trained persons therefore restricting local jurisdiction activities in enforcing the proposed regulations.

Very truly yours,


E. G. Brickson, Chairman
NEHA Noise Committee



NEW JERSEY NOISE CONTROL COUNCIL

380 Scotch Road
West Trenton, N.J. 08628
609-292-7696

August 6, 1979

Mr. Henry E. Thomas
Director
Standards and Regulations Division (ANR-490)
Office of Air, Noise, and Radiation
U.S.E.P.A.
Washington, D.C. 20460

Dear Mr. Thomas:

This will acknowledge with appreciation your communications and materials forwarded regarding proposed revised and expanded railroad noise regulations. I regret our belated response but submit the following questions raised by our Council for your consideration.

1. Where does the Federal Court Decision leave our State with respect to enforcement? Must we adopt or pass identical statutes in order to take any action or can we proceed to enforce newly determined Federal requirements?
2. Can enforcement only be taken with regard to the railroad operations defined in the Federal regulations, or can we proceed under existing industrial noise ordinances where appropriate?
3. Can the State or local governments enforce their own standards for railroad equipment not covered by the Federal regulations?
4. Must EPA be petitioned for a waiver of preemption under Section 17(C)(2) of the act if a local rule is necessitated by "special local conditions" and is "not in conflict" with the Federal regulations?
5. What enforcement activity can be expected from Federal sources and how soon?
6. What effort has been made to determine levels for the pass-by operation of trains? Are we specifically prohibited from developing ordinances and regulations to control this source?

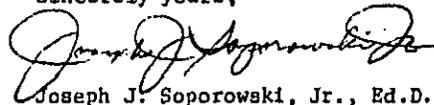
It was the considered opinion of our Council that enforcement was rather indefinite. We are also left wondering whether Federal responsibility will terminate with the writing of this regulation. In general, it appeared to some of our members that the Federal Court Decision might make it more difficult for the State of New Jersey and its municipalities to take action on the types of railroad noise problems we have experienced in the past.

Page 2 - H. Thomas

August 6, 1979

Thanks again for keeping us posted on this action. We trust our comments will be of some value.

Sincerely yours,



Joseph J. Soporowski, Jr., Ed.D.
Chairman, N.J.N.C.C.

jm

cc: H. Doerfler

ENVIRONMENTAL IMPROVEMENT AGENCY



County of San Bernardino

ENVIRONMENTAL HEALTH SERVICES DEPARTMENT
1111 East Mill Street, Building 1 • San Bernardino, CA 92415 • (714) 383-1617

Richard L. Roberts, R.S., M.P.H.
Director
Environmental Health Services

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Loma Linda	Victorville
Montclair	Upland

August 1, 1979

Henry Thomas, Director
EPA Standards & Regulations Division
U.S. Environmental Improvement Agency
Washington, D.C. 20460

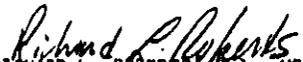
PROPOSED REVISED EPA RAILROAD NOISE STANDARDS

On July 23, 1979, the San Bernardino County, California, Board of Supervisors adopted the enclosed resolution pertaining to the EPA proposed revised railroad noise regulations.

The County Board of Supervisors resolved to encourage the executive and legislative branches of the U.S. Government to reconsider the immediate adoption of proposed revised railroad noise regulations; and, encourage a national forum for debate on the impact of these pre-emptive regulations on local government.

Further, the County requests that this resolution be disseminated to appropriate federal and state political and decision making levels for the purpose of enlisting support and stimulating action on their part.

Your assistance on this matter is appreciated.


RICHARD L. ROBERTS, R.S., MPH, Director
Dept. of Environmental Health Services


KENNETH C. TOPPING, Director
Planning Department

RLR:dr
Enc.

REC'D AUG 2 1979
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RESOLUTION #79-196

A RESOLUTION ADOPTED BY THE SAN BERNARDINO COUNTY, CALIFORNIA, BOARD OF SUPERVISORS PROTESTING THE ADOPTION OF E.P.A. REVISED NOISE REGULATIONS PRE-EMPTING THE AUTHORITY OF LOCAL GOVERNMENT TO INDEPENDENTLY SOLVE COMMUNITY NOISE PROBLEMS ASSOCIATED WITH RAILROAD OPERATIONS AND CALLING FOR PUBLIC DEBATE ON THE ISSUES.

WHEREAS, the E.P.A. has been given U.S. Court of Appeals order to adopt revised noise regulations governing all railroad equipment and facilities; and,

WHEREAS, in accordance with the provisions of the U.S. Noise Control Act (PL 92-574), Section 17, these regulations completely pre-empt the authority of local government; and,

WHEREAS, the standards will not only legalize existing levels of railroad operation noise but will also in the case of railyards, allow significant increases in noise emissions at yards which are currently "quiet"; and,

WHEREAS, the adoption of the revised proposed E.P.A. railroad noise regulations, because of the pre-emption clause, will potentially have serious adverse impact on land use decisions previously made by local governments in reliance on local standards; and,

WHEREAS, although it is recognized that certain uniformity of standards must prevail in matters of inter-state commerce, to totally pre-empt local authority in its traditional responsibility to protect public health and welfare is not in the best interest of the local citizenry; and,

WHEREAS, with the passage of the Noise Control Act, congress intended that pre-emption of local authority be limited and that federal control should center on those aspects of the industry truly in need of uniform treatment of a national standard,

THEREFORE, BE IT RESOLVED, that the San Bernardino County, California, Board of Supervisors encourage the Executive and Legislative branches of the U.S. Government to reconsider the immediate adoption of the proposed revised noise regulations and to delay said adoption until such time that sufficient public congressional hearings are held to clearly identify the impact upon local government as it affects their responsibilities to their constituents; and,

BE IT FURTHER RESOLVED, that short of conducting public hearings on the matter that arrangements be made in conjunction with the Federal Office of Mediation and Conciliation Service to provide for debate and compromise between the railroad industry and state and local government on the matter of pre-emption; and,

BE IT FURTHER RESOLVED, that copies of this Resolution be forwarded to legislators who represent San Bernardino County at both the Federal and State levels, the County Legislative Advocate in Sacramento and the National Association of Counties, for the purpose of enlisting their support and stimulating action on their part.

PASSED AND ADOPTED by the Board of Supervisors of the County of San Bernardino, State of California, by the following vote:

AYES: SUPERVISORS: McElwain, Hansberger, Townsend, Hammock, Mayfie
NOES: SUPERVISORS: None
ABSENT: SUPERVISORS: None (m)

-2-

.....
STATE OF CALIFORNIA }
COUNTY OF SAN BERNARDINO } ss.

I, ANDREE DISHAROON, Clerk of the Board of Supervisors of San Bernardino County, California, hereby certify the foregoing to be a full, true and correct copy of the record of the action taken by said Board of Supervisors, by vote of the members present, as the same appears in the Official Minutes of said Board of its meeting of July 23, 1979

49 Dated: July 23, 1979
cc: EHS-Roberts (10); EIA (1);
PLANNING (1); FILE

ANDREE DISHAROON
Clerk of said Board

A - 68

charles m. salter associates, inc.

**consultants
in
acoustics**

*architecture
engineering
the environment*

17 August 1979

Rail Carrier Docket No. ONAC 79-01
Office of Noise Abatement and Control (ANR-490)
U.S. Environmental Protection Agency
Washington, DC 20460

Subject: Proposed Revision to Rail Carrier Noise Emission
Regulations--Measurement of Average Sound Levels
Near Railyards

Re: Railyard Noise Measurement Data, Background Document
EPA 550/9-78-207 Appendix B, February 1979
pp. 290-4, 319-31

Gentlemen:

I would like to take this opportunity to inform you of some recent research accomplished in conjunction with a proposed draft ANSI standard for environmental noise monitors. This information may be of use to the EPA, especially when considering the contribution of impulsive sounds to the average railyard noise level. These comments are offered as part of the public response to the proposed regulations.

Discussion

The above-referenced EPA document cites several instances when impulsive sounds occurred near railroad "hump" yards. For example, Mr. G.A. Russell reported that events such as wheels screeching and cars coupling at the West Springfield and East Deerfield, Massachusetts Railyards generated maximum noise levels whose values exceeded the hourly average noise level (Leq) by 10 to 40 decibels. Mr. Russell pointed out that the "bangs" and "crashes" from the railyard are loud enough to be startling; however, since these impulsive noises last for only a fraction of a second, he felt that they did not significantly affect the Leq. This latter assumption may be erroneous for reasons discussed below.

Charles M. Salter, PE
Margo Meierbachtol
Anthony P. Nash, PE
Richard R. Illingworth, PE
Richard B. Rodkin

79-01-1741

APR 9 1979 10 04

Integration of Acoustical Transients

Standardizing the response of integrating sound level meters to single transients is a subject of concern to members of ANSI working group S1-45 because modern acoustical instrumentation enables one to obtain an average noise level generated by a complex mixture of both steady and transient analog signals. These analog signals may not be available for later inspection or analysis by specialized instruments, nor is it practical in most cases to do so. Thus, it is important that these data be processed correctly by the environmental noise monitor in the field.

Unfortunately, simply requiring that the monitor meets ANSI S1.4-1971, "Specifications for Sound Level Meters" does not necessarily mean the instrument will integrate or average transient signals with adequate accuracy.

Proposed Test for Transient Signal Response

Dr. Robert W. Young of the Naval Ocean Systems Center has proposed that a series of transient tests be incorporated in the draft ANSI standard for environmental noise monitors. These tests are intended to quantify the transient response fidelity of integrating and averaging sound level meters relative to the computed response for an idealized sound level meter. The test series employ a single-cycle sine burst which is applied to the microphone input and is subsequently processed by the frequency-weighting, squaring, and integrating sections of the instrument.

Several existing environmental noise monitors have already been evaluated with this technique. I have studied these test results and found that the measured response of existing instruments range from excellent to grossly deficient when compared to the predicted values. The response deficiencies are almost always negative; i.e., the instrument reports a maximum sound level or sound exposure level less than the predicted value. It occurred to me that these measurement deficiencies could also cause existing instruments to report incorrect average noise levels near railyards, especially if impulsive noise is present.

When I discussed these test results with one instrument manufacturer, he expressed the opinion that the proposed test is too severe for classifying the accuracy of environmental noise monitors. He felt that high level transients of short duration rarely occur in community noise measurements. Moreover, this manufacturer and a number of other people

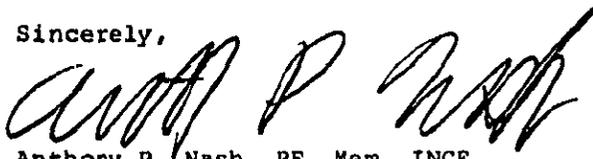
U. S. EPA
17 August 1979
Page Three

probably assume that such transients do not materially increase the Leq. I think this belief may have originated from experience with instruments which did not accurately process short transients.

* * *

In conclusion, I suggest that railyard noise data collected to date using environmental noise monitors be reviewed carefully with consideration for the instrument's capabilities. In the interim, average railyard noise levels should be measured only with instruments whose impulse response has been demonstrated to be within one decibel of the predicted value for pulses as short as two milliseconds.

Sincerely,



Anthony P. Nash, PE, Mem, INCE

/APN

cc: B. Conner, Tracor
B. Ceci, Metrosonics
K. Eldred, BBN
W. Kundert, GenRad
R. Procunier, EPA, region IX
J. Wootten, Bruel & Kjaer
R.W. Young, Naval Ocean Systems Ctr



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

27 AUG 1979

OFFICE OF
AIR, NOISE, AND RADIATION
(ANR-490)

Mr. Hollis Duensing, Esq.
Association of American Railroads
American Railroads Building
1920 L Street, N.W.
Washington, D. C. 20036

Dear Mr. Duensing:

We appreciate the interest and concerns of the Association of American Railroads (AAR) as expressed in their July 2, 1979, Rail Carrier Docket submission in response to the Notice of Proposed Rulemaking, published in the Federal Register of April 17, 1979 (44 F.R. 22959 et. seq.). We are carefully considering the data, analyses, and suggestions provided by the AAR in developing the final rules. As such, a number of issues and questions have surfaced which, we believe, if clarified will be helpful in developing the final regulation. This letter, therefore, is to solicit the additional clarifying information specified in Attachments A and B.

We would appreciate responses to the questions posed at your earliest convenience, but, in order to be useful, no later than September 15, 1979. In some instances we appreciate that additional time may be needed to compile certain data or responses from your members. Nevertheless, we would like to receive responses to as many of the questions as possible at your earliest convenience.

If there are any questions relating to this request, Mr. Bob Rose may be contacted at (703) 557-7666.

Sincerely,

A handwritten signature in dark ink, appearing to read "H. E. Thomas".

Henry E. Thomas, Director
Standards and Regulations Division

Attachments: (2)(A & B)

August 21, 1979

ATTACHMENT A

QUESTIONS POSED TO THE AAR CONCERNING THEIR DOCKET RESPONSES
(Rail Carrier Docket No. ONAC 79-01)

A. Retarder Barriers

1. In arriving at its estimate of \$75 per linear foot, the EPA assumed that many yard operators would use proven barrier construction techniques, such as those employed by the Terminal Railroad Association of St. Louis as described in the Background Document, and in the Illinois EPA submission to the Docket (June 18, 1979). These 12-foot high barriers were constructed and installed at a cost of approximately \$50 per linear foot.

In its submission to the Docket (July 2), the AAR estimates a "real world" cost of \$200 per linear foot installed. Could the AAR provide the EPA with details of the cost estimate? Is this an average cost from several suppliers? If so, would you identify the suppliers who provided the AAR data? Are the assembled labor rates those of railroad personnel or local contractors? For which geographic parts of the country are the rates applicable?

Would you provide the breakdown of hardware and installation costs underlying the \$200 per foot estimate? Could the separate costs for master and group retarders be provided? Are any costs for service interruption included? If so, please delineate.

2. On page 25, reference is made to cost estimates from an established supplier of \$200 per linear foot. Would you please identify this supplier.

3. On pages 26 to 29, reference is made to potential costs incurred for track relocation, service interruption, and miscellaneous other items in connection with barrier installation. These costs appear in grand total in Table 11 without specific allocation or statement of underlying assumptions. Would the AAR provide the EPA with a cost allocation breakdown for the AAR cited \$271 million cost for barriers?

4. Exhibit C of the AAR docket submission tabulates the number of retarders requiring relocation and the number of tangent point retarders by district or railroad. Could the AAR provide the same data to the EPA by individual yards so that the location and number of yards potentially affected can be determined?

5. Could the four rail-yard yards referenced on page 28, which are equipped with a total of 166 tangent point retarders be identified with the breakdown of the number of retarders and location relative to the railroad property line for each?

6. The discussion on pages 29 and 30 refers to safety and maintenance difficulties created by the presence of barriers. Can the AAR provide EPA with more detail on the types of difficulties encountered and their approximate operating or other costs? In particular, what new maintenance procedures or safety requirements will be imposed, what new difficulties will be encountered, and at what cost? In what aspects are these different from other difficulties procedures or requirements presently encountered by the railroads for analogous situations?

B. Switch Engine

1. On page 37, reference is made to noise measurements of a study performed for the AAR on an EMD SD 40-2. The study performed for the AAR by the Donaldson Company is entitled "Locomotive Muffler Feasibility Study" (September 1975). The AAR assertion that little or no reduction in the overall noise of idling locomotives appears to rest heavily on this study. Would the AAR provide the EPA with a copy of this study, and any other studies which may have been done for them to determine locomotive noise abatement feasibility?

2. Would you provide us the survey referenced on page 36 of the AAR submission indicating the number of road locomotives and switch engines assigned to switching service?

3. Could a breakdown be provided of the labor costs for switch engine retrofit (reference on page 42) in terms of labor rates and hours of effort?

4. Could the basis of the annual muffler maintenance costs of \$2000 referenced on page 43 be provided?

5. Does AAR have data indicating which railroad companies would require the purchasing of 450 new locomotives indicated on page 46, and the basis for determining the number of new locomotives purchased on a road-by-road basis?

6. If railroads were to purchase the 450 new locomotives cited in the AAR submission, is it reasonable to assume that these locomotives will be used exclusively for yard service, or can it be expected that some or all will see service in other areas? Will the purchase of these locomotives make available for other service, locomotives which will be replaced by these 450?

7. The AAR analysis of restarting cold locomotives cites a new GM/EMD system which allows an engine to be shut down and restarted without engine damage. The analysis further states that the system is available only on the new F-40 series of passenger locomotives, and at an added cost of \$16,000 to \$20,000. Is this system now being ordered by any of your member roads? If so, what roads and how many locomotives are being so ordered? Is such a system cost efficient in your view, over the life of a locomotive taking into account present and likely increases in fuel costs?

Are any other systems available to perform a similar task? The Conrail submission to this docket proposes an electrical standby system which would require an investment of \$5,300 per locomotive, plus investment in compatible yard facilities. What is the feasibility of this system for other railroads in the United States? Does this Conrail system meet the same needs as the GM/EMD system, which appears somewhat more costly and more limited?

C. Refrigeration Cars

1. In the statement of Robert McKee (Exhibit J), the major noise sources of the mechanical refrigerator car are identified as muffler noise, fan noise, and engine mechanical noise. He states that the muffler currently in use reduces muffler noise to a level approximately equivalent to the engine mechanical noise. Are these observations based on actual noise measurements? If diagnostic studies have been performed by the Pacific Fruit Company to determine component noise levels, the EPA would like to take the results of these studies into consideration in any reassessment it might make regarding the refrigerator car noise standard. Would you provide us with a copy of those noise studies and noise data regarding the insertion loss provided by the heavy-duty muffler now installed in "virtually every refrigerator car"?

2. Does the AAR have any data concerning the current noise emission, and costs of quieting of TOFC/COFC units? Also, would the AAR provide us data concerning the number of TOFC/COFC units presently in use and any projections of the growth of the fleet vis-a-vis the projection of the fleet of refrigerator cars?
3. Would the AAR provide the names of suppliers of the refrigeration units used on refrigerator cars?
4. Would the basis for the costs quoted on page 80 for the refrigerator car retrofit technology be provided?

D. Load Cell Test Sites

1. Reference is made on pages 84-85 to load test cell enclosures that have been constructed by the Illinois Central Gulf Railroad at a cost of \$300,000 and that Santa Fe estimates multi-unit load test cell facilities at \$1.6 million each. Do the referenced existing load cell enclosures serve any other purpose(s) than noise reduction from load cell testing?
2. Does the difference in the number of load cell sites mentioned on page 84 (182) and the number requiring enclosures stated on page 86 (179) imply that three load test sites are currently enclosed?
3. Would the enclosures proposed by the AAR, estimated at \$500,000 each, serve any purpose(s) other than noise reduction for load cell tests?
4. Could a cost breakdown including materials, labor, heating, cooling, insulation, lighting, etc., be provided for the various load cell enclosures referenced on pages 84 through 87?
5. What noise reduction was assumed to be required of the load test cell enclosures in order to meet the proposed property line standard?

E. Releasable Retarders

1. For the Chessie System's releasable retarders discussed on page 95; could the breakdown of costs among retarder removal, engineering, materials, contingencies, equipment rental and insurance be provided?

2. Similarly, could such cost breakdowns be provided for the releasable retarder cost estimates provided on pages 94 and 95?
3. Could the AAR estimate of \$40,000 for releasable retarders be broken down into equipment purchase and installation costs?

F. Yard Measurement

Would any backup data you have be provided concerning the basis of the costs for yard measurements provided on pages 102 and 103?

G. Health/Welfare

1. What would the AAR propose as the noise impact descriptor(s) for assessing impact of rail yard noise on surrounding communities? (pp. 122-126) Would you provide your rationale for this proposal?
2. What data or other information does the AAR have to support your view that rail yard noise has no greater impact (on surrounding communities) at night than during daytime? (pp. 122-126)
3. What data or other information does the AAR have to support your non rail yard source noises are generally at the same level or greater than rail yaard source noise? (pp. 122-126)
4. What data or other information does the AAR have to support your view that annoyance due to rail yard noise does not have an adverse public health and welfare impact? (p. 130)
5. Section IV (p. 127) is general: What data are there to support the AAR view that leaving out many rail yard noise sources from the analyses does not underestimate the impact?
6. Could the data used to conclude that non rail yard noise sources that are dominant at a particular location are also equally dominant throughout the entire community, be provided us? (p.131)
7. Could the supporting data or analyses used to conclude that it is incorrect to consider that some community areas are impacted by several rail yard noise sources be made available? (p. 131)
8. Would the supporting data or analyses used to conclude that a nonuniform population density around a rail yard results in a significantly different impact magnitude than a uniform density be made available? (p. 132)
9. Do you have any data or other information to indicate that there are no cases where the population density decreases with distance from rail yards? (p. 132)

H. General Questions

1. In the AAR's analysis of technology and cost; what assumptions or data have the AAR used with respect to the number of rail yards for which the day-night equivalent sound levels are clearly dominant with respect to receiver property measurement locations?

2. In the AAR's analysis of technology and cost; what assumptions or data have the AAR used with respect to either the distance between the rail yard property line and receiver property measurement locations, or the amount of noise attenuation achieved due to any buffer regions separating the rail yard property line from receiver property measurement locations?

3. Is the AAR aware of noise problems associated with rail carrier activities which have served to impede interstate commerce by rail? If so, would you provide us with the state or local political entities involved, the date or dates associated therewith, and whether the problem was resolved or not. Further, we would appreciate you providing us with a list of state or local government actions related to noise which have resulted in railroads having to commit staff or other resources to resolve.

ATTACHMENT B

ADDITIONAL TECHNICAL QUESTIONS CONCERNING
THE WYLE REPORT WR 79-10

A. Section 2

1. What were the specific reference documents associated with each set of noise level samples for each source listed in Table 2-1?
2. Which statistical test or procedure was used to calculate the 90 percent confidence limits shown in Table 2-1? Are these limits the levels of the noise energy or intensity 90 percent confidence limits, or the 90 percent confidence limits of the level (dBA) values, and why?
3. Why were car impacts not ranked in Table 2-2?
4. Why were Wyle Labs data for Barstow, Barr, and Cicero rail yards not included in analyses shown in Table 2-3?

B. Section 4

1. What are the supporting data to indicate that the L_{dn} contribution from non rail yard noise sources in most cases exceeds 55dB? (p. 28)
2. Where were the non-rail yard noise sources that were dominant relative to the measurement locations? (p. 30)
3. Why is it not true that if there is overlap in noise exposure from multiple sources, the same people will be impacted by different source groups? (p. 33, 1st para.)
4. Why was Population Exposed used in the comparison example instead of ENI? (p. 33, 2nd para.)
5. What was the specific method used to combine the noise levels from the various sources, and what were the calculation procedures? (p. 33 3rd para.)
6. What data are there to support the contention that hump yards are generally located in low population density industrial areas? (p. 35, 2nd para.)

CONRAIL



August 21, 1979

Mr. Richard Westlund
Project Engineer
U.S. Environmental Protection Agency, ANR
1921 Jefferson Davis Highway, CM-2, Rm. 1102
Arlington, Va. 20460

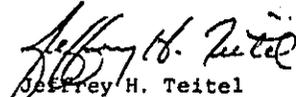
Dear Rick:

Conrail hopes that the enclosed data that you requested on August 20, 1979 on car coupling speeds will assist you in setting realistic noise limitations. As requested, the raw data reflecting 63,979 speed readings is accompanied by a summary for each quarter. This data, accumulated between August 1978 and August 1979, reflects one page for each yard tested plus every 40th page.

Please let me know if Conrail can supply you with any additional information to evidence actual car coupling speeds.

Best regards.

Sincerely,


Jeffrey H. Teitel
Director-Regulator Affairs

830 - Six Penn Center Plaza
Philadelphia, Pa. 19104

A - 80

CONSOLIDATED RAIL CORPORATION SIX PENN CENTER PLAZA PHILADELPHIA, PA 19104

NOTE: Conrail submitted 143 raw data sheets on this car coupling survey, conducted by the various yards in the Conrail system. These data sheets contain information on the individual car coupling events such as car number, loaded or empty, impact speed, track number, etc. with approximately 20 coupling events displayed on each sheet. Because of the lengthiness of this submittal we have chosen to print only the two summary tables along with one sample data sheet. The full submittal with all data sheets may be persued at EPA's Public Information Reference Unit, Room 2404, 401 "M" Street, S.W., Washington D.C. 20460, or obtained by contacting Mr. Robert C. Rose, Railroad Program Manager (ANR-490), 401 "M" Street, S.W. Washington, D.C. 20460, (703) 557-7666.

1st quarter 79 2nd quarter 79
 3rd quarter 78 4th quarter 78
 DATE: 8-21-79

REGION: _____
 DIVISION: _____
 YARD: _____

Summary of System Critical Coupling Program

L_1	L_2	X	f	fX				
0.0 - 0.9	0.9	.5	52	26.0				
1.0 - 1.9	1.9	1.5	2147	3220.5				
2.0 - 2.9	2.9	2.5	5266	14015.0				
3.0 - 3.9	3.9	3.5	16839	38111.5				
4.0 - 4.9	4.9	4.5	15589	70150.5				
5.0 - 5.9	5.9	5.5	16733	92381.5				
6.0 - 6.9	6.9	6.5	6143	39929.5				
7.0 - 7.9	7.9	7.5	2380	17850.0				
8.0 - 8.9	8.9	8.5	1087	9239.5				
9.0 - 9.9	9.9	9.5	407	3866.5				
10.0 - 10.9	10.9	10.5	139	1459.5				
11.0 - 11.9	11.9	11.5	54	621.0				
12.0 - 12.9	12.9	12.5	14	175.0				
13 - 13.9	13.9	13.5	12	162.0				
14.0 - 14.9	14.9	14.5	4	58.0				
15.0 - 15.9	15.9	15.5	1	15.5				
17.0 - 17.9	17.9	17.5	1	17.5				
Total			60958	257299.0				

Total Impact Average = $\frac{fX}{n} = \frac{257299.0}{60958} = 4.75$ } Av. Coupling Speed of Cars which made coupling
 Total Overspeed Average = $\frac{fX}{n} = \frac{73354}{10242 \text{ (Cars over 6mph)}} = 7.17 \text{ (Av)}$

1st quarter 78 2nd quarter 79
 3rd quarter 78 4th quarter 78

Region: _____
 Division: _____
 Yard: _____

Date: 8/21/79

Summary of System Control Case Handling Program

Shift	Total	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	Stall
3 rd a/c	7173	2	303	809	1300	1619	1489	76	289	108	40	9	4		1	720
4 th "	6970	3	297	625	1193	1751	1762	619	205	83	45	9		1	11 35	369
1 st "	7682	6	331	731	1329	1935	1707	656	261	178	57	17	5	1	1	406
2 nd "	7772		279	635	1372	1788	2001	718	268	114	33	19	11	2	5	324
Tot	29,597	11	1210	2800	5193	7293	7025	2699	1017	485	175	54	20	4	12	1599
	5583	11	184	440	1004	1379	1359	493	356	124	67	13	17	1	14	293
	4987	1	141	404	818	1232	1237	494	215	55	23	9	1		14 35	147
	5115	7	204	613	754	1205	1263	488	196	98	32	20	3	4	1	222
	6753		127	413	1062	1700	1570	680	281	141	51	26	9	3		241
Tot	21,438	14	656	1920	3638	5416	5873	2765	948	417	178	68	30	8	5	1002
	3209	17	115	277	513	614	803	380	149	77	23	9		1		141
	2084		36	115	376	554	596	264	66	38	9	4			1	81
	2395	9	47	112	495	766	624	131	58	25	7	2	2			97
	4256	1	83	312	644	946	1572	460	142	45	15	2	2	1		101
Tot	11,944	27	251	886	2053	2482	3535	1174	415	185	54	17	4	2	1	420
Total	63,979	52	2147	5606	10,859	15,527	16,473	6143	2,350	1,081	407	139	54	14	18	3,021

70% Total Sample

.001 .034 .048 .170 .244 .259 .096 .037 .017 .006 .012 .001 .001 .047

Handling program yard radar monitoring record



STERN	DIVISION CHICAGO	YARD CLEHOUR
DAILY CARS DISPATCHED 300	WEATHER CLD. COOL	DATE MAY 1, 1979
CB NO. 208-A	ENGINE NO. 8194	TIME ON DUTY 8 AM
CONDUCTOR BOSSEDI	RET. DPR. FLAT SWITCH	TRAINMASTER JOHN KOUNKA
TIME MONT. STARTED 9 AM	TIME MONT. STOPPED 12:45 AM	EMPLOYEES CONDUCTING MONT. JAMES R. DEARSE

	CAR NUMBER	L/E	IMPACT SPEED	TRACK	REMARKS
1	MDT 11724	E	3.8	9	
2	PRR 125612	L	3.4	20	
3	CVC 462 179	L	3.2	9	
4	PRR 81486	E	4.0	19	
5	ZXC 1010	L	4.0	9	M+5
6	SLSF 42064	E	3.2	15	
7	NW 154246	L	3.9	9	M+1
8	CR 886680	L	3.5	27	
9	TTAX 978951	E	3.4	9	M+4
10	PBE 648	E	3.9	15	
11	TTX 975230	L	4.0	10	M+1
12	CR 73192	L	3.9	9	
13	A+D 368055	E	4.0	15	
14	CR 628727	L	3.2	22	M+3
15	LIN 25269	E	3.0	4	
16	LON 26174	L	4.0	24	
17	NW 98975	E	3.1	4	M+13
18	PC 552670	L	3.1	19	STILL
19	ESG 8498	L	2.1	4	M+7
20	? 530587	L	3.3	19	

M = Multiple Car Groups + 1
 = Non-coupling

ORIGINAL - MANAGER OPERATIONS, D.P.
 COPY - DIVISION SUPERINTENDENT
 S - NO COUPLING (REMARKS)
 L - LOAD (L/E)
 E - EMPTY (L/E)
 M - MULTI-CAR CUT (REMARKS)

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