

Bedford, Mass., serving the intermediate point of Fall River, Mass.; and the off-route points of Warwick, West Warwick, Cranston, Pawtucket, Central Falls, North Providence, East Greenwich, and Warren, R.I., and Fairhaven, Mass.; *textile products* as a *common carrier* over irregular routes between Fall River and New Bedford, Mass., on the one hand, and, on the other, Coventry, Lincoln, Westerley, and Woonsocket, R.I., and points in Massachusetts. FALL RIVER & NEW BEDFORD EXPRESS, CO., INC., holds no authority from this Commission. However, it is affiliated with T. J. MOTOR LINES, INC., Ridgehill Rd., Assonet, Mass. 02702, which under a Certificate of Registration in No. MC 96979 is authorized to operate as a *common carrier* in intrastate commerce, solely within the state of Massachusetts. Application has been filed for temporary authority under section 210a(b).

No. MC-F-12729. Authority sought for purchase by KEITH FULTON & SONS, INC., 21 Water Street, Cambridge, MA. 02141, of the operating of R. DOUGHTY SONS CO., INC., 63 Jacobus Avenue, South Kearny, N.J. 07032, and for acquisition by KEITH FULTON, JR., 21 Water St., Cambridge, MA. 02141, and control of such rights through the purchase. Applicants' attorneys: Frank J. Weiner, 15 Court Square, Boston, MA. 02108, and Donald A. Sterling, 185 Engle Street, Englewood, N.J. Operating rights sought to be transferred: *Heavy machinery* and *such commodities* as require special equipment by reason of size or weight, as a *common carrier* over irregular routes between points in the New York, N.Y., Commercial Zone, as defined by the Commission, on the one hand, and, on the other, points in New Jersey, New York, Pennsylvania, Delaware, and the District of Columbia. Vendee is authorized to operate as a *common carrier* in Massachusetts, Connecticut, Maine, New Hampshire, New York, Vermont. Application has been filed for temporary authority under section 210a(b).

No. MC-F-12730. Authority sought for purchase by PACIFIC TRANSPORTATION LINES, INC., 443 Delaware Ave., Buffalo, NY 14202, of the operating rights and property of JACKSON DISTRIBUTION CORP., 348 W. Fayette St., Syracuse, NY, and for acquisition by JAMES J. MORAN, 160 S. Forest Rd., Williamsville, NY, of control of such rights and property through the purchase. Applicants' attorney: William J. Hirsch, 43 Court St., Buffalo, NY 14202. Operating rights sought to be transferred: *Such merchandise* as is dealt in by wholesale, retail, and chain grocery and food business houses, and, in connection therewith, *equipment, materials, and supplies* used in the conduct of such business, as a *contract carrier* over irregular routes, between points within the territory bounded by a line beginning at Louisville Landing, N.Y., and extending in a southeasterly direction to points in a defined area of New York, between points in the above-specified territory, on the one hand, and, on the

other, points within the territory bounded by a line beginning on the shore of Lake Ontario at a point 5 miles directly north of Webster, N.Y., and extending south through Webster, Canandaigua, and Rushville to Hammondsport, N.Y., thence in a southeasterly direction to Beaver Dams, N.Y., thence west to Beaver Dams, N.Y., thence west through Cuba to South Dayton, N.Y., thence through Buffalo to Wilson, N.Y., and thence east along the shore of Lake Ontario to a point on the lake 5 miles north of Webster, including the points named, from Syracuse, N.Y., to points in St. Lawrence, Franklin, Steuben, Schuyler, Chemung, Tioga, Broome, Chenango, Delaware, Oswego, Schoharie, Montgomery, Fulton, Herkimer, and Schenectady Counties, N.Y., and points in Bradford and Susquehanna Counties, Pa., with restrictions. Vendee is authorized to operate as a *contract carrier* in Maryland, New York, Ohio, Pennsylvania, Virginia and West Virginia. Application has been filed for temporary authority under section 210a(b).

No. MC-F12731. Authority sought for control by AMERICAN COMMERCIAL LINES, INC., 2919 Allen Parkway, Houston, TX 77019, of (BB) ALL-AMERICAN, INC., AND (BB) MIDWEST COAST TRANSPORT, INC., both of 900 West Delaware, Sioux Falls, SD 57101, and for acquisition by TEXAS GAS TRANSMISSION CORPORATION, 3800 Frederica St., Owensboro, KY 42301, of control of ALL-AMERICAN, INC., and MIDWEST COAST TRANSPORT, INC., through the acquisition by AMERICAN COMMERCIAL LINES, INC. Applicants' attorneys: Axelrod, Goodman, Steiner & Bazelon, 39 S. LaSalle St., Chicago, IL 60603, and E. Phillips Malone, 3800 Frederica St., Owensboro, KY 42301. Operating rights sought to be controlled: (B) *General commodities*, and numerous *specified commodities*, as a *common carrier*, over regular and irregular routes, from, to, and between specified points in Minnesota, South Dakota, Iowa, Nebraska, Illinois, Missouri, North Dakota, Wisconsin, Indiana, Michigan, Ohio, Kentucky, Kansas, Wyoming, Tennessee, Pennsylvania, and Colorado, with certain restrictions, serving various intermediate and off-route points, over numerous alternate routes for operating convenience only, as more specifically described in No. MC 29120 and Sub numbers thereunder; and (BB) *General commodities*, and numerous *specified commodities*, as a *common carrier* over regular and irregular routes, from, to, and between all points in the United States (except Alaska and Hawaii), serving various intermediate and off-route points, with restrictions, as more specifically described in No. MC 111812 and Sub numbers thereunder. This notice does not purport to be a complete description of all of the operating rights of the carriers involved. The foregoing summary is believed to be sufficient for purposes of public notice regarding the nature and extent of these carriers operating rights, without stating, in full, the entirety, thereof. AMERICAN COMMERCIAL LINES, INC., holds no au-

thority from this Commission. However, it controls (1) COMMERCIAL CARRIERS, INC., 10701 Middlebelt Rd., Romulus, MI 48174, which is authorized to operate as a *common carrier* in all points in the United States (except Hawaii), (2) TERMINAL TRANSPORT COMPANY, INC., 248 Chester Ave. SE., Atlanta, GA 30316, which is authorized to operate as a *common carrier* in Kentucky, Indiana, Illinois, Tennessee, Georgia, Alabama, Florida and Ohio. Application has not been filed for temporary authority under section 210a(b).

The Baltimore and Ohio Railroad Company and The Chesapeake Ohio Railway Company, 2 North Charles Street, Baltimore, Maryland 21201, represented by Mr. René J. Gunning, Attorney for Applicants, 2 North Charles Street, Baltimore, Maryland 21201, hereby give notice that, on the 22nd day of December 1975, they filed with the Interstate Commerce Commission at Washington, D.C., a joint application under Section 5(2) of the Interstate Commerce Act for an order approving and authorizing the Baltimore and Ohio Railroad Company to lease and operate a portion of the Chesapeake and Ohio Railway Company, which application is assigned Finance Docket No. 28084. The nature of the proposed transaction is the lease and operation by the Baltimore and Ohio Railroad Company of a portion of the Chesapeake and Ohio Railway's line of railroad. The line of railroad which the Baltimore and Ohio Railroad Company proposes to lease and operate is an 8.66 mile portion of the Chesapeake and Ohio Railway Company's Pomeroy Branch located between Valuation Station 1501+21, near Dundas, Ohio, and Valuation Station 1043+80, near Creola, Ohio, all in Vinton County, Ohio.

Applicants have alleged in their application that the quality of the human environment will not be affected by the proposed Commission action requested in the application. In accordance with the Commission's regulations (49 CFR 1100.250) in Ex Parte No. 55 (Sub-No. 4), *Implementation—National Environmental Policy Act, 1969*, 340 I.C.C. 431 (1972), any protests may include a statement indicating the presence or absence of any effect of the requested Commission action on the quality of the human environment. If any such effect is alleged to be present, the statement shall include information relating to the relevant factors set forth in Ex Parte No. 55 (Sub-No. 4), supra Part (b) (1)-(5), 340 I.C.C. 431, 461.

The proceeding will be handled without public hearings unless protests are received which contain information indicating a need for such hearings. Any protests submitted shall be filed with the Commission no later than February 13, 1976.

THE BALTIMORE AND OHIO RAILROAD COMPANY

By the Commission.

[SEAL] ROBERT L. OSWALD,
Secretary.

[FR Doc.76-1151 Filed 1-13-76; 8:45 am]

WEDNESDAY, JANUARY 14, 1976



PART II:

ENVIRONMENTAL PROTECTION AGENCY



PORTABLE AIR COMPRESSORS

Noise Emission Standards

Title 40—Protection of Environment

CHAPTER I—ENVIRONMENTAL
PROTECTION AGENCY

[FRL 469-4]

PART 204—NOISE EMISSION STANDARDS
FOR CONSTRUCTION EQUIPMENT

Portable Air Compressors

On October 29, 1974, notice was published in the *FEDERAL REGISTER* (39 FR 38186) that the Environmental Protection Agency (EPA or Agency) was proposing noise emission standards for new portable air compressors distributed in commerce. The purpose of this notice is to establish final noise emission standards for new portable air compressors distributed in commerce by establishing a new Part 204 of Title 40 of the Code of Federal Regulations. This final rulemaking is promulgated pursuant to section 6 of the Noise Control Act of 1972; 86 Stat. 1234; Pub. L. 92-574.

I. INTRODUCTION

Through the Noise Control Act of 1972 (86 Stat. 1234), the Congress established a National policy "to promote an environment for all Americans free from noise that jeopardizes their health and welfare." In pursuit of that policy, Congress stated, in section 2 of the Act, "that, 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." As part of this essential Federal action, section 6 of the Act requires that the Administrator identify products which are major sources of noise, and if such products fall into certain specified categories, one of which is construction equipment, to prescribe regulations unless in his judgment noise emission standards are not feasible. The Administrator has identified portable air compressors as a major source of noise (39 FR 22297).

Under section 6 of the Act, such regulations are to include noise emission standards, setting limits on noise emissions from new products, which are requisite to protect public health and welfare, taking into account the magnitude and conditions of use of such products, the degree of noise reduction achievable through the application of best available technology, and the cost of compliance. The final regulation being promulgated contains a performance-type noise emission standard and specifies the testing procedure necessary to assure compliance with the emission standard.

Under section 15 of the Act, the Administrator shall certify as a low-noise-emission-product (LNEP) any product which emits noise in amounts significantly below the levels specified by any noise emission standard included in a regulation promulgated pursuant to section 6, for which certification application has been properly filed and which the Administrator determines is suitable for use as a substitute for a type of product in use by agencies of the Federal Government. At this time the specific LNEP

noise level(s) for portable air compressors has not been determined; however, the Agency will continue to study various options for LNEP criteria and assign specific level(s) in the future. Accordingly, a subsection in the regulation has been reserved for LNEP standard and selection criteria.

The Agency believes that the standard contained in the regulation represents the level of noise emission protective of health and welfare and achievable by the best technology currently available, taking into account the cost of compliance; however, the Agency will consider all new information and data which becomes available or is presented to it, and may in time revise the regulations in accordance with section 6(c)(3).

The final regulation being promulgated reflects the desire of Congress to protect both health and welfare and interstate commerce through establishment of uniform national noise emission standards for new portable air compressors which require national uniformity of treatment in order to facilitate interstate commerce. Such treatment is required for those manufacturers who would be burdened by conflicting State and local noise controls.

Under section 6(e)(1) of the Noise Control Act, after the effective date of a regulation promulgated under section 6 regarding product noise emission levels, no State or political subdivision thereof may adopt or enforce any law or regulation which sets a limit on noise emissions from new products regulated by EPA, unless such law is identical to the applicable EPA regulation. Thus, the preemption is against nonidentical State and local laws regulating the noise emission level of a Federally-regulated new product. The requirement of "identity" applies to the standard and those elements of the measurement methodology which define the standard; these must be identical to those in the EPA regulation. However, other elements of the State or local law need not be identical. Such elements include the list of persons subject to the regulations, sanctions, enforcement procedures and correlatable or equivalent "short tests" used for enforcement purposes.

Section 6(e)(2) of the Act specifies that nothing in section 6 shall preclude or deny the right of any State or political subdivision thereof to establish and enforce controls on environmental noise and sources thereof through the licensing, regulation, or restriction of the use, operation, or movement of any product or combination of products. Such controls which are reserved to State and local authority under this section include, but are not limited to, the following:

- (1) Controls on the time of day during which products may be used.
- (2) Controls on the places or zones in which products may be used.
- (3) Controls on the noise emission level of products during use and operation enforceable against the consumer.
- (4) Controls on the number of products which may be operated at the same time.

(5) Controls on noise emission level from the properties on which products are used.

(6) Controls on the licensing of products.

(7) Controls on the manner of operation of products.

Thus, Federal regulations promulgated under section 6 preempt State and local time of sale noise emission standards for a product only after the effective date of a Federal regulation applicable to such product and only to the extent that State or local noise emission standards (and the measurement methodology which defines the standard) are different from the Federal standards relating to that product.

Conversely, State and local authorities are free to enact regulations on new products offered for sale with standards identical to the Federal standards. The Environmental Protection Agency encourages the adoption of such regulations so that State and local governments may aid in the enforcement of the standards.

State and local time-of-sale noise emission regulations applicable to products which are not covered by Federal regulations are in no way preempted by these regulations.

Recognizing that the Noise Control Act was enacted to protect the public from adverse health and welfare effects due to noise, EPA is carrying out its regulatory responsibilities for abating noise from construction equipment, and in the present instance, portable air compressors, through regulatory action under section 6.

The portable air compressor is one of approximately twenty major pieces of construction equipment that contribute to construction site noise. The Agency intends to commence regulatory action on other construction equipment products in the near future, and the levels chosen for the standards in this regulation are consistent with the overall requirements to quiet all products in order to ultimately reduce noise at all construction sites to an acceptable level.

The legal basis and factual conclusions which support promulgation of this regulation were set forth in substantial detail in the notice of proposed rulemaking published in the *FEDERAL REGISTER* on October 29, 1974 (39 FR 38186). This publication solicited public comment with the comment period extending initially from October 29, 1974, to December 2, 1974, and subsequently extended by *FEDERAL REGISTER* notice (39 FR 42379) to December 31, 1974.

To ensure that all the issues involved in the proposed regulation would be fully addressed prior to the promulgation of the final regulation, public hearings were held in Arlington, Virginia on February 18, 1975, and in San Francisco, California on February 25, 1975. In conjunction with these hearings, an additional comment period was allowed, extending from February 18, 1975, to March 10, 1975. The principal issues reviewed at these meetings related to the lead time set forth for manufacturer compliance with the standard, the enforcement program specified in the reg-

ulation, and the projected impact of the regulation on manufacturers, users, the construction industry, and the general public.

Public comments received during each of the three public comment periods, as well as the transcripts of the public hearings, are maintained at the EPA Headquarters, 401 M Street, SW., Washington, D.C. 20460, and are available to the public during normal working hours (Monday to Friday, 8:00 a.m. to 4:30 p.m.).

II. SUMMARY OF THE REGULATION

The regulation establishes standards for noise emissions resulting from the operation of newly manufactured portable air compressors distributed in commerce. The standard specifies A-weighted sound pressure level, measured at a distance of 7 meters (23 feet) from the surface of the portable air compressor enclosure, using slow meter response. The standard measurement procedure used to obtain the data is presented in more detail in § 204.54, Subpart B.

Effective January 1, 1978, portable air compressors with maximum rated capacity between 75 and 250 cubic feet per minute (cfm), inclusive, shall not produce an average sound level in excess of 76 dBA when measured and evaluated according to the methodology provided by this regulation.

Effective July 1, 1978, portable air compressors with maximum rated capacity greater than 250 cfm shall not produce an average sound level in excess of 76 dBA when measured and evaluated according to the methodology provided by this regulation.

The regulation also incorporates a detailed enforcement program which includes production verification, selective enforcement auditing procedures, warranty, compliance labeling, and anti-tampering provisions.

III. SUMMARY OF COMMENTS RECEIVED

The EPA has carefully considered all of the comments received regarding the proposed noise emission regulation for portable air compressors. A discussion of these comments with the Agency's response thereto follows:

A. TECHNOLOGY

(1) One commenter stated that the 76 dBA limit does not represent currently available technology.

The "Background Document for Proposed Portable Air Compressor Noise Emission Regulation" presents data from several compressors that emit noise levels of 76 dBA and lower at 7 meters. Technological availability is, EPA believes, adequately met when mass-produced commercially available products are in commerce today which produce noise at or below the standard.

(2) Several commenters asserted that data relating to degradation of noise emission characteristics are insufficient to predict degradation patterns for air compressors.

The Agency pursued this issue by soliciting industry comment and supportive data regarding the escalation of com-

pressor noise that would accrue during compressor usage. Responses to the solicitation indicated that data were not available at this time, since in the past there was not a need for the assessment.

Accordingly, EPA has undertaken studies to develop these data. Industry representatives have also agreed to begin to collect and to make available to the Agency such noise emission degradation data so that proper analysis and decisions regarding useful life standards, including degradation effects, can be made at a later date.

(3) Several industry commenters stated that fuel consumption can be expected to increase as a result of the regulation, while another industry commenter stated that fuel consumption could be expected to remain the same or actually decrease.

As has been indicated, there is substantial disagreement within the industry itself regarding the impact of the regulation on fuel consumption. From a technical standpoint, those commenters contending that fuel consumption may increase indicate that it will be due primarily to an increase in static pressure rise within the portable air compressor enclosure due to added noise control components. This in turn would cause increased fan loading and a concomitant increase in fuel consumption on the order of 3-8 percent. Another industry commenter stated that there would be no fuel consumption increase that would result from the quieting efforts. That commenter indicated that the fuel savings derived from the use of more efficient fans would balance increased fuel consumption resulting from increased fan loading.

The Agency, in the course of its technology studies, attempted to assess fuel usage differences between standard and quieted compressors of the same model. All attempts proved futile because changes in fuel usage were within the manufacturing tolerance variances and thus there was no apparent significant effect.

(4) Several commenters stated that the quieting technology is not the same for all sizes and configurations of air compressors.

The Agency assessed the quieting technology applied to several models of compressors on the market today. The assessment revealed that, while the large, high air flow capacity compressors generally require a greater silencing effort than did the smaller, lower air flow capacity units, similar techniques were applied to achieve the silencing. Accordingly, the effective date of the regulation has been modified to provide manufacturers with a longer lead time to integrate noise control features into the design and manufacture of larger portable air compressors.

(5) Several commenters were concerned about the problems they may encounter regarding availability of component parts, especially quieter engines, necessary to manufacture portable air compressors which will comply with the standard.

The withdrawal from the market of certain engines used by portable air

compressor manufacturers because of reasons other than noise control became known during the comment period. In assessing the impact of this action, the Agency questioned the portable air compressor manufacturers about the problems they anticipated as a result of this action by engine manufacturers. All who responded to the questions indicated that the action would have a dramatic adverse impact on the engineering design and manufacturing time required to develop compressors meeting the standard and further indicated that component delivery problems could be handled if the effective date of the regulation were extended. The Agency considered all aspects of this problem and, accordingly, extended the time for compliance with the regulation since the results of studies showed that such extension would not significantly compromise health and welfare benefits to be derived from the regulation. It is the Agency's belief that the additional time allotted affords the lead time stipulated by the manufacturers to allow them to overcome any delivery problems they are likely to encounter regarding component parts.

(6) Two commenters stated that "band-aid" measures for controlling noise emissions are more expensive than integrated design changes.

The Agency recognized this and, accordingly, solicited comments from portable air compressor manufacturers as to the time it would take to make and implement the necessary design changes to produce quiet machines. The effective date of the regulation is based to a substantial degree on the data supplied by the respondent manufacturers. It is the Agency's opinion that the time span before the regulation becomes effective provides manufacturers with the requisite lead time to accomplish the necessary design changes, if they so desire, to preclude the "band-aid" approach.

(7) Two commenters responded to the solicitation, in the preamble of the proposed regulation, for views as to whether a standard should be imposed on portable air compressors measured in C-weighted sound pressure level.

The intent of the solicitation was to elicit information in regard to imposing a C-weighted noise emission standard to guard against design practice that would shift the major spectral components of portable air compressor noise to low frequencies discriminated against by the A-weighted sound pressure, at the possible expense of escalated low frequency noise, which in turn could cause vibration problems in structures located in proximity to construction sites.

At the time the proposed regulation was developed, the Agency had limited data to support a C-weighting sound pressure level standard. The public solicitation for data in this regard has provided little information and no new data to show the need for a dBC standard. Accordingly, only a dBA standard is being promulgated.

(8) One commenter suggested that devices be installed that would shut down

a compressor if the access doors were opened.

The Agency considered the validity and practicality of such a requirement and decided not to require the installation of such devices for the following reasons: (1) One use of portable air compressors is to supply breathing air to workmen involved in activities underground where the naturally occurring air supply is minimal. An inadvertent shutdown of the compressor in this situation could have catastrophic consequences. (2) Users could easily circumvent automatic shutdown devices if such devices proved to be an annoyance or otherwise hindered the user's normal operating procedures. However, the Agency recognizes that the doors of portable air compressors may be an element of design incorporated into the product to achieve compliance with the regulation. Accordingly, and as stated in the tampering section of the regulations, the removal or rendering inoperative, for purposes other than maintenance, repair or replacement, of such a device is prohibited.

(9) Several commenters responded to the solicitation, in the preamble of the notice of proposed rulemaking, for comments in regard to the proposed measurement methodology and/or the advisability of expressing the portable air compressor standard in terms of sound power rather than average sound pressure level.

During the development of the proposed regulation, EPA carefully considered the various measurement methodologies and sound descriptions suitable for the assessment and characterization of portable air compressor noise. As a result of these studies, it is EPA's opinion that the methodology as proposed will provide data to accurately characterize portable air compressor noise with the simplicity that is requisite to facilitate product verification at the manufacturer's plant and enforcement in the field. The following private and public proclamation by portable air compressor manufacturers is significant in this regard:

Members of CAGI have carefully studied the measurement methodology and at the January 19, 1975, meeting of the Compressed Air and Gas Institute, Portable Air Compressor Section, it was resolved the physical measurement procedures contained in the proposed EPA measurement methodology be accepted by CAGI.

While the Agency has opted for a measurement methodology with which industry is most familiar at this time, and which supports its compliance requirements, and has opted to use A-weighted sound pressure level as the descriptor of portable air compressor noise, it recognizes that situations may exist or arise where other methodologies and descriptors may be just as appropriate and, for that matter, have more utilitarian use. Such instances or situations may exist within a particular product industry when one wishes to describe the energy output of devices for noise emission diagnostic evaluation and for comparing the noise emission of devices which are similar in size and kind. Ac-

cordingly, the Agency encourages industry to proceed toward standardization of methods to determine sound power with attendant sound energy descriptors, as it is endeavoring to do at this time. The Agency has carefully reviewed two recent efforts toward standardization developed by the National Bureau of Standards (NBS) and Technical Committee 43 of the International Standards Organization (ISO), and it is EPA's opinion that these test methodologies are feasible and viable and EPA would recommend their use for the determination of portable air compressor sound power in situations requiring such assessment.

(10) One commenter stated that the test specification for a fifth microphone above the compressor should be reconsidered.

The Agency included an overhead microphone location to guard against compressor design that would direct major sound energy upwards which could be of significance to persons working or residing in high rise buildings adjacent to construction sites and/or where portable air compressors are located below ground level and the noise impacts on those above the equipment affected. The Agency reconsidered the need for the overhead microphone position and concluded that its imposition is indeed requisite to control upward radiated compressor noise, for without it there is no practicable way to assure that upward radiated noise will not exceed the stipulated level.

(11) Several commenters stated that in order to comply with the regulation, manufacturers must design for levels well below the standard.

In developing the regulation, the Agency recognized that a class of compressors, for that matter a single compressor, may emit noise levels that vary by as much as ± 2 dBA as the result of manufacturing tolerances. Accordingly, the Agency does not recognize the need for manufacturers to design "well below" the standard to ensure compliance with the Regulation.

(12) Several commenters stated that the EPA measurement methodology is not suitable for in-use testing at a construction site, with reasons such as anticipated difficulty in measuring seven meters above a compressor, difficulty in teaching noise inspectors to perform noise level averaging on energy basis, and problems with high ambient noise as the rationale for the statement.

In the development of the proposed measurement methodology, it was the Agency's intent to arrive at a test method that could facilitate both noise emission testing in the controlled environment at the manufacturer's test site as well as noise emission level assessment in the uncontrolled environment of construction sites. What has evolved is a simple, practicable test method which, while not patently ideal for both test environments, provides manufacturers of portable air compressors a method to assure compliance with the noise emission standard. It also provides State and local noise inspectors with a methodology or, at a minimum, a methodology base on which

to build or modify, as local conditions may dictate, for their development of equivalent test procedures for in-use noise emission evaluation.

(13) One commenter stated that no machine larger than 1200 cfm was tested as the basis for the EPA background document.

While it is true that the Agency did not conduct tests on portable air compressors larger than 1200 cfm, test data on machines with air flow capacities up to 2000 cfm were made available to the Agency and are in fact included in a listing presented in Table 7-5(c) of the "Background Document for Proposed Portable Air Compressor Noise Emission Regulations."

(14) One commenter stated that a conflict between noise suppression technology and safety considerations may exist regarding the flame retardant properties of acoustical insulation laggings.

EPA interprets this comment to mean that acoustical materials that may be employed within compressor enclosures might tend to support combustion. In addition, those materials that might be employed would act as a sponge to soak up fuel and oil and thus create a potentially hazardous condition should the oil/fuel flash point temperature be exceeded. As most acoustical materials may be chemically treated with a flame retardant to prevent combustion, and it is common practice to encapsulate acoustical foams and fiberglass in mylar and other thin filmed impervious protective coverings to preclude absorption of liquids, EPA is of the opinion that no conflict exists between safety considerations and noise suppression technology.

(15) One commenter responded to the preamble solicitation for comment on whether the Regulation should address portable air compressor pure tones.

Currently, major pure tone spectral components generated by today's portable air compressors occur at low frequencies, less than 500 hertz, and are not particularly annoying as the frequencies are below the range of acute ear sensitivity. However, the Agency recognizes that as portable air compressor designs change so too may the spectral character of the pure tone generating components to cause annoying pure tones. Accordingly, the Agency will continue to address the potential problems of pure tone noise with respect to portable air compressors, and it solicits on a continuing basis such information from concerned parties. Should evidence in the future show this to be a significant problem, the Agency is prepared to propose such control measures as may be necessary.

(16) Several commenters felt that some tolerance on the standard should be allowed on field tests to account for environmental and instrumentation variances likely to occur when portable air compressors are tested in environments different from the controlled environment of the manufacturer's facility.

The Agency recognizes that, due to environmental and instrumentation differences, noise emission data measured at State and local test sites may differ from

that measured during SEA and PV testing, and the Agency will take this into account when reviewing test data.

B. HEALTH AND WELFARE

(1) Several commenters stated that, in setting the regulation, consideration should be given to usage conditions and amount of exposure to the public for different types of machines.

In developing the regulation, the Agency considered the usage conditions and amount of exposure to the public for different types of machines. In the analysis, the Agency employed portable air compressor usage factors and noise levels to investigate health and welfare benefits derived from the regulation of the total population of portable air compressors. A second analysis was conducted for the population of compressors split into units typically used in urban areas and those typically used in rural areas. The studies considered the usage of compressors in five phases of construction: Domestic housing, nonresidential, industrial, and public work construction. The "Background Document for Portable Air Compressors" presents further details of the analysis.

(2) Several commenters stated that the benefits to public health and welfare do not justify the economic impact of the Regulation.

It must be kept in mind that society is now paying billions of dollars for noise pollution associated with lost productivity, higher medical bills and health insurance premiums, payments in successful noise offense litigation and assessment of property value in high noise exposure areas without accruing any direct benefit for such payments. Implementation of the Noise Control Act of 1972 will accomplish a shift in the economic burden from the impacted population to the users of the products and their customers and hence will provide society with direct benefits in the form of quieter products and a quieter environment.

It is estimated that over 27 million people are exposed to construction site noise levels that jeopardize their health and welfare. Since construction site noise is typically comprised of contributions from more than twenty different types of construction equipment, regulation of the majority of the pieces of equipment will be required to appreciably and effectively reduce this type of noise. The portable air compressor has been identified as the first piece of construction equipment requiring noise emission control to foster, in the long term, less construction site noise. While portable air compressors may not provide the highest sound level at construction sites, they do contribute significantly to community noise exposure. Air compressors rank with dump trucks and concrete trucks in producing the highest sound energy per day. The noise emission regulation for portable air compressors is requisite to protect the health and welfare of the American public.

Studies performed in accordance with the requirements of the Noise Control Act of 1972 indicate that compliance with the regulation will reduce the impact

upon people from construction site noise by 14.7 percent with an estimated attendant 12.3 percent increase in the list price of portable air compressors. Upon regulation of noise emissions from dump trucks and concrete trucks, a reduction in total impact by approximately 45 percent is anticipated when the current population of compressors and trucks is replaced by quiet units. Further reduction in total impact is contingent upon effective noise emission regulations of other construction equipment. Considering the health and welfare benefit obtained from the regulation, the Agency believes that the added cost of compressors is a productive expenditure and therefore justified.

(3) Several commenters suggested that EPA undertake a more thorough cost/benefit study.

The Agency conducted additional economic impact and health and welfare impact analyses employing data and information made available to it as the result of the written comment period and public hearings regarding the proposed regulation. The Agency also solicited information from portable air compressor manufacturers regarding the lead time necessary to comply with various standard levels. The regulation being promulgated is based, in part, on the result of these analyses.

C. ECONOMICS

(1) Several commenters indicated that they felt that the Portable Air Compressor Regulation is inflationary.

The EPA, in promulgating a noise source emission regulation for newly manufactured products, is directed by the Noise Control Act of 1972 to consider the cost of compliance, best available technology, and impact on the public health and welfare. The Agency has carefully weighed the potential adverse economic impacts associated with the promulgation of the regulation and compared them to the benefits that would accrue to the population affected by the reduction in noise emitted by portable air compressors. The conclusion is that the 12.3 percent list price increase is cost effective in terms of the benefits derived. The health and welfare benefits of the proposed regulations have been discussed previously in paragraph (2) of section B.

(2) Several commenters indicated that they felt that the smaller manufacturers will be more severely impacted and their costs per unit will be higher than those for larger portable air compressor manufacturers.

The Environmental Protection Agency pursued this issue through visits and communications with large, medium, and small portable air compressor manufacturers in an effort to determine the validity of the comment. As a result of the Agency's investigations and data surfaced in pursuit of the issue, it became apparent that the effective date of the Regulation was the single major factor controlling the degree of economic impact on the portable air compressor industry of the proposed standard, particularly on the smaller manufacturer. According to the data, a smaller manufac-

turer faced a greater potential for serious economic impact from the proposed twelve-month effective date because of limited resources and manpower to accomplish the requisite redesign of his product line to achieve product compliance in a timely fashion. As such, the smaller manufacturer could be constrained by the Regulation from introducing his units into commerce and thereby accrue a severe economic impact. Accordingly, after determining that a limited extension of the effective date of the Regulation would not severely impact the health and welfare benefits to be derived, the Agency has extended the effective date of the regulation to twenty-four months for compressors with air flow capacity less than or equal to 250 cfm and thirty months for compressors with air flow capacity greater than 250 cfm. It is the Agency's belief that this extension allows adequate lead time for an orderly readjustment by all manufacturers to preclude potential economic hardships associated with time constraints imposed by the proposed effective date.

(3) Many commenters indicated that the economic impacts of the useful life provision contained in the proposed regulation were not included in the cost of compliance studies that were undertaken.

The Agency reviewed the useful life provision contained in the proposed regulation in light of the comments made in the various dockets. The Agency has elected not to specify at this time a specific requirement for portable air compressor useful life noise emission standard. The Agency has chosen, however, to defer a useful life provision in the portable air compressor regulation until further studies regarding the degradation of noise emissions of portable air compressors and the associated costs of compliance have been completed and assessed against the health and welfare benefits which could result from the imposition of such a useful life standard.

(4) Several commenters stated that the cost of constructing a test facility at a manufacturer's location is economically unfeasible.

The Agency does not feel that the required measurement/testing procedure will necessitate the construction of elaborate, expensive test facilities for portable air compressor manufacturers. Accordingly, the test procedure, including the description of the test site, as it appeared in the proposed regulation stands as the EPA test procedure which will be utilized to determine compliance with the standard. However, as now stated in the regulation, alternate test procedures which are approved by EPA by virtue of demonstrated correlation with the prescribed procedure, may be employed by the manufacturers.

(5) Many commenters stated that the estimated 16 percent per unit price increase underestimates the true cost to comply with the regulation due to the enforcement provisions.

The 16 percent preliminary estimate of list price increase included in the preamble to the proposed regulation did not

include costs for enforcement and useful life provisions. In the final analysis performed by the Agency, the deferment of a useful life standard and further consideration of the enforcement scenario led to the following estimated list price increases for newly manufactured portable air compressors:

1. 11.2 percent for compressors with rated flow capacity less than or equal to 250 cfm.
2. 13.0 percent for compressors with rated flow capacity greater than 250 cfm.
3. An additional estimated 0.4 percent list price increase may accrue through the costs of the revised enforcement scenario of the regulation.

(6) One commenter indicated that there was no need for Federal regulation of portable air compressors because marketplace pressures will force the production of quieted machines without a regulation.

This assertion has, in fact, not been demonstrated. Although there are models of compressors that are quieted, the noise emissions of the compressor population as a whole has not been reduced to a level that is protective of the public health and welfare. Additionally, there are no indications that the industry as a whole was moving in the direction of quieting the compressor fleet to levels that are considered to be protective of the public health and welfare.

(7) Several commenters indicated that the Regulation will have a harmful impact on the foreign trade patterns in the industry.

The Agency assessed the impact of the Regulation on trade patterns. The analysis showed that there would be no change in import patterns and no material impact on the balance of trade. Since the Noise Control Act specifically exempts units manufactured solely for export, there will be no changes in portable air compressor export patterns resulting from this rulemaking.

(8) One manufacturer indicated that the regulation will have the effect of increasing air compressor rentals, to the detriment of industry sales volume.

The Agency reviewed this issue during its background study to assess the impact of the proposed regulation. Today without Federal regulation, approximately 50 percent of portable air compressor unit shipments reach the end user through rental or rental/purchase agreements. The reason for this rests with cost effectiveness; that is, in many instances it is probably more economical to rent a unit for a specific job taking place in a finite period of time than to tie up capital in a unit not receiving full usage.

While it is recognized that rental usage could increase, by virtue of its apparent economic advantage, the Agency has no quantitative data to show any increase solely due to imposition of the Regulation. The Agency has, however, estimated that imposition of the regulation would cause no more than a 4.3 percent decrease in total unit sales.

(9) One manufacturer suggested that a board of review be established to ensure that manufacturers' costs are not excessive.

The Noise Control Act of 1972 does not contain any provision for the establishment of such a panel. The EPA has, however, made every attempt to estimate the economic impact on the portable air compressor manufacturing industry. The regulation does not in EPA's judgment impose any unreasonable or excessive costs on the industry.

(10) One commenter stated that large manufacturers can be expected to stockpile standard machines before the effective date of the regulation.

The Noise Control Act prohibits distribution in commerce of products manufactured after the effective date which do not meet the standard. Thus, under the Act, Congress intended that products manufactured earlier shall be exempt and may be distributed in commerce at any time even if they do not meet the standards. The nature of portable air compressor manufacturing and marketing is such that distributors are expected to have several pre-regulation compressors available for sale at the time the regulation becomes effective, and this probability was considered in the assessment of health and welfare impact on the regulation.

The analysis of this issue focused on industry production capacity, i.e., basic ability to stockpile. On an average across the industry current production capacity is such that limited stockpiling is possible, if the assumption is made that the compressor market will remain relatively stable until the regulation is effective. Combined in this analysis is the historical flexibility of the portable air compressor industry in responding to market demand fluctuations. Consideration of these factors and the general expense of stockpiling inventory led to the Agency conclusion that the stockpiling possibility will be evenly assessed by industry and that individual manufacturers will be able to avert market disruptions in that event.

(11) Several manufacturers stated that the one-year effective date of the regulation is an insufficient amount of time and will cause an increased economic burden on the industry.

In further study and discussions with the various manufacturers, the Agency was able to better estimate the time dependency of successful compressor redesign. The presence in the industry of several manufacturers who have little or no quieting experience, and additional information which showed that quieting is more difficult to achieve in the larger compressors, led us to extend the time for compliance. In addition, our further study revealed that many of the costs for redesign are fixed, and lengthening of the time for compliance should allow for more orderly adjustment in the industry.

(12) Various industry members commented that the regulation will force the discontinuation of some manufacturers' compressor models.

This issue was considered in further economic impact studies following the public comment period. Obviously, for those manufacturers who now market both standard and quiet compressors in

identical cfm categories, it would be implied that they would discontinue the so-called standard model as a result of the regulation. The more critical possibility is the unforeseen, forced temporary or permanent discontinuation of a compressor model because of added expense to quiet in the time frame specified, or because of assembly delays resulting from component part deliveries approaching or exceeding the effective date of the regulation. Analysis of the problem included this possibility and the Agency concluded that the extended time now allowed for compliance with the standard as opposed to the time frame originally proposed will allow manufacturers to effectively compensate for design and assembly problems of this nature. However, some manufacturers now market marginally profitable models, and the possibility of discontinuation of these models because of this regulation exists. In instances of discontinuation of marginally profitable models, it is the Agency's position that this is not necessarily a detrimental effect of the regulation; the Agency has no specific information indicating the likelihood of this occurring.

(13) Three commenters stated that the regulation will cause the non-productive expenditure of labor and materials.

During the development of the regulation, the Agency conducted studies to arrive at a noise emission standard requisite to protect the public health and welfare with an adequate margin of safety, taking into account the magnitude and conditions of use of portable air compressors, the degree of noise reduction achievement through the application of best available technology, and the cost of compliance. The standard that has evolved, is, in the Agency's opinion, technically feasible, non-inflationary, and protective of the public health and welfare. Accordingly, the regulation will cause productive expenditure of labor and materials.

D. ENFORCEMENT

(1) Two of the commenters felt the compliance and enforcement aspects of the proposed portable air compressor regulation, which are derived from air pollution control regulations, could not realistically or practically be applied to the air compressor manufacturing industry.

The regulations being promulgated contain production verification requirements and selective enforcement auditing requirements. The production verification scheme differs from certification under the Clean Air Act. No extensive endurance testing is required by production verification, and the manufacturer is not precluded from selling his product until he has accomplished the requirements of the production verification process. In essence, the Clean Air Act certification process is merely used to allow the manufacturer to demonstrate that he has the requisite technology in hand to produce conforming products. The production verification process is based on the assumption that the manufacturer has the technology available to

quiet compressors and must demonstrate that he is able to apply that technology in practice to produce compressors complying with the standard.

The selective enforcement auditing scheme is very similar to that which EPA has proposed for use under the Clean Air Act to verify compliance of production vehicles with the standard. It is a noncontinuous scheme, wherein samples of products are tested to determine whether they conform to the standards. Such a scheme is equally applicable to the testing of completed motor vehicles as it is to testing completed portable air compressors. It should be kept in mind that this testing will only be done on the specific request of the Agency.

(2) One commenter felt the regulations manifested a basic distrust of American industry accompanied by a desire for EPA to keep its responsibilities to a minimum.

The basic EPA enforcement strategy under the Noise Control Act of 1972 places a major share of the responsibility on the manufacturer for testing to determine compliance of new portable air compressors with these regulations and emission standards. This does not relieve EPA of its responsibilities but merely allows a manufacturer to have his personnel in control of many aspects of the compliance program, thereby minimizing the burden of these regulations on his business. Such manufacturer responsibility and control results from the fact that EPA has faith in the integrity of manufacturers to comply with these regulations. EPA, however, does reserve the right to verify that the manufacturer is in fact complying with the regulations. It is for this reason that EPA provides for monitoring by EPA personnel of tests performed by the manufacturer and other manufacturer actions taken in compliance with these regulations. The final purpose of such monitoring is to assure the Administrator that the information he is receiving is accurate to enable him to make the proper determination that compressors being distributed in commerce by a manufacturer are in fact in compliance with these regulations.

(3) Some manufacturers commented that production verification would delay and unnecessarily burden the manufacturer's distribution process since distribution in commerce could not take place until production verification has been completed.

The regulations have been modified to permit manufacturers to distribute compressors in commerce as soon as production begins. The requirement still remains that the manufacturer must test certain models of his early production units, which for the most part are the loudest configuration of a category. However this testing must now take place, as soon as weather conditions permit, within a 45-day grace period, during which production verification is waived. The 45-day period is designed to accommodate a manufacturer's transportation needs and to accommodate poor weather conditions. In addition, the re-

quirement that the manufacturer provide a 10-day notice of his intent to test has been removed.

(4) Some manufacturers suggested that the number of configurations be minimized and only those parameters for configurations that directly affect noise emissions be used. One manufacturer endorsed a revision of the definition of configuration to cfm, engine type and rpm, with category being defined by cfm only.

Although the definition of category has remained the same and is based on those elements which most directly affect noise, the definition of configuration has been changed, with the defining parameters significantly reduced. The Agency has calculated, based on available information, the total number of categories that would require testing based on production verification if carried out in accordance with these regulations, and has found that it results in a nominal number of products requiring testing. Any further reduction in the criteria used to define category would not be warranted, on the basis of reducing test burden, since the number of units requiring testing is now realistic.

(5) Some manufacturers commented that the sampling plans are based on high volume production and that the concept of using a modification of a well-known attribute plan is inconsistent with small volume production.

As a result of such comments, the sampling plans contained in the proposed regulation have been modified to provide for situations in which production volume is small. Additionally, the revised sampling plan significantly reduces the number of products requiring testing.

(6) One commenter suggested that the selective enforcement auditing (SEA) strategy, which had a proposed acceptable quality level (AQL) of 6.5 percent, contradicts the requirement that every new compressor conform to the applicable noise emission standard, since inherent in such a strategy is the assumption that some nonconforming products will be distributed in commerce.

The regulation being promulgated now contains an AQL of 10 percent and, although this AQL may result in some nonconforming products being distributed in commerce, the basic requirements still remain that a manufacturer is prohibited from distributing into commerce any products which do not conform with the standard. The basic intent is that all products being distributed in commerce must conform to the standard. Any product that is tested and which is known not to conform to the standards may not be distributed into commerce until the nonconformity is remedied. Furthermore, every compressor is warranted to conform to the standard at the time of sale. It is merely the intent of EPA not to take enforcement action which addresses the aggregate of the products or the process by which they are produced until the process average as determined by SEA testing exceeds the AQL of 10 percent. That is not to say

the EPA permits the distribution in commerce of products that exceed the standard, but only that no enforcement action will be taken on the aggregate by EPA unless an AQL of 10 percent is exceeded. A batch which meets the AQL of 10 percent is considered to indicate compliance by virtually 100 percent of the compressor population. The 10 percent allowance provides for test variability and random human error.

(7) One commenter suggested that the SEA process placed an unnecessary burden on a manufacturer and all that is required is the "certification" from the manufacturer that he has tested a number of units and that they conform to the regulations.

The selective enforcement auditing scheme is not a continuing requirement. Testing is performed at the request of the Administrator. The testing burdens will exist only when deemed necessary by the Administrator for purposes of gathering information in order to make a determination regarding the conformity of products being distributed in commerce by a particular manufacturer.

The issuance of a test request may not be necessary where the manufacturer can demonstrate through his own test data on production units, using a sampling plan similar to or better than the promulgated plan, that his process average is below the AQL of 10 percent. This amounts to the "certification" procedure suggested by the commenter.

(8) One commenter suggested that SEA should be invoked only when the Administrator had cause to believe a configuration is being sold in commerce that fails to comply with the regulation.

Although EPA agrees with the spirit of that comment, the Administrator prefers to maintain the discretion that Congress intended by not having placed any such limitations on his testing authority. It is the EPA's intent, however, that such test requests be issued when the need arises and that such need be clearly demonstrated.

(9) One commenter felt that production verification and the selective enforcement auditing scheme would provide a high assurance of product conformity and further, that a major savings in administrative costs for both the manufacturer and EPA should be realized because this particular enforcement scheme has definite benefits over the enforcement scheme employed in certification of automobiles pursuant to the Clean Air Act of 1970.

(10) Several commenters were concerned with the Administrator's discretion to refuse to grant a hearing in situations where section 11(d) orders were issued.

The regulations have been modified to provide that in situations where section 11(d) orders are issued, notification and an opportunity for a hearing are afforded.

(11) Several commenters criticized the attempt by the regulations to limit the right of counsel and recommended that such limitation be stricken from the regulations.

As a result of those comments, portions of the regulation that would, in fact, limit the right of counsel have been deleted.

(12) Several commenters questioned the need and the validity of EPA to make broad inspections and to have the right to inspect and photograph all literature and test records. The commenters indicated that such provisions extend far beyond the authority conveyed to EPA and far in excess of any Agency needs.

The regulations have been modified to limit inspections and acquisition of data to information necessary for the Administrator to make a determination that the manufacturer is distributing conforming products in commerce. The authority of EPA personnel is limited to examining records of tests conducted on production verification products or products tested pursuant to SEA; inspecting areas where testing is conducted and where products are stored prior to testing; and inspecting areas of the assembly plant where the products are being assembled. EPA has no interest in forced entry into developmental laboratory areas. However, where such areas are part of the test site used for compliance testing, it is the intent of the regulations to permit access to such areas regardless of the fact that developmental labs or test sites are near by. If a manufacturer wishes to preclude EPA Enforcement Officers from visiting or inspecting their development testing or laboratory areas, they must be separated from areas where compliance testing is performed.

(13) Several commenters stated that the information recording and reporting requirements are burdensome and costly.

The regulations have been revised so that information needed to describe a product may be satisfied by the submittal of sales literature and data needed to demonstrate compliance may be satisfied by submittal of information accrued during manufacturer self-imposed diagnostic testing to assure themselves that conforming products are being distributed in commerce. The regulations have also been revised so that all data may be mailed to EPA in lieu of the proposed telephone reporting requirements.

(14) Several commenters indicated that the proposed regulations in some instances required the repetitive submission of information.

The final regulations provide that where information has been previously submitted and has remained unchanged, subsequent reports need only refer to the previous submissions.

The regulations have been revised so as to permit execution by an authorized company representative in lieu of a Corporate Vice President of reports required to be filed by a manufacturer.

(15) One commenter felt that cease to distribute orders went beyond the statute and should be modified.

The Agency has interpreted section 11 (d) of the Act, which provides for the issuance of administrative orders, as inclusive of the power to issue cease to distribute orders and recall orders. Any

such orders would be preceded by notice and opportunity for a hearing.

(16) One commenter felt that the statement contained in the proposed regulation, "all costs associated with recall and remedy of noncomplying compressors shall be borne by the manufacturer" could be interpreted very broadly.

The costs normally associated with a recall are the costs of conducting the campaign itself, as well as the cost of remedying the nonconformity, including parts and labor. These are the costs the manufacturer would be required to absorb.

(17) Several commenters felt the costs of the administrative enforcement provisions would be significant because of the large number of products that would be required to be tested as a result of the production verification and audit tests, the recordkeeping and reporting requirements, and the costs of constructing added test facilities to accomplish all the required testing.

EPA has reexamined the cost impact of the administrative enforcement provisions of production verification and selective enforcement auditing and has found them to be reasonable. As a result of information gathered during the rulemaking process, which included a public hearing and many written submissions to the docket, modifications were made to the regulations in the area of the administrative enforcement provisions. These modifications have reduced the recordkeeping and reporting requirements, and have made the production verification and selective enforcement auditing processes more flexible and tailored to the industry. These changes in themselves have resulted in additional reductions in cost to the manufacturer over those that would have been incurred based on the proposed regulation.

Significant capital expenditures can be eliminated by those manufacturers who avail themselves of the EPA Enforcement Test Facility at Sandusky, Ohio, in lieu of constructing additional facilities.

(18) Several commenters were concerned that the warranty required by § 204.58-1 of the proposed regulation was a useful life performance warranty.

The warranty required of the manufacturer is a performance warranty that the air compressor met the noise emission standards on the date of sale to the ultimate purchaser. Because performance is warranted for the date of sale only, warranty claims must relate back to a non-conformity on that day. To make the best case in relating back to the date of sale, the claimant should be able to point to a defect in design, materials, or workmanship which existed on the sale date and which caused noise emissions to exceed the standard. Thus, although the claim may be made against the manufacturer at any time during the life of the compressor, such claim must relate back to non-compliance on the date of sale.

(19) One commenter wished clarification regarding which "manufacturer"

must issue the noise emission warranty.

The manufacturer who is required to issue and to honor the noise emission warranty is the manufacturer who is required to production verify. The fact that a defective part, component, or system was purchased from another manufacturer does not alter this warranty. Manufacturers who production verify may seek indemnification from suppliers for liability which is attributable to the supplier.

(20) Some commenters asked for a definition of what constitutes tampering and whether the use of aftermarket parts (parts not manufactured or authorized by the original equipment manufacturer) would constitute tampering.

A list of acts which could adversely affect the noise control system of a compressor and would constitute tampering, as determined by EPA, will be published in the owner's manual. This will give specific indications of those acts which will be considered tampering by the Agency unless it can be shown that noise emissions are not adversely affected by the act.

In general, in terms of noise-related aftermarket parts, any nonoriginal equipment aftermarket part (including a rebuilt part) may be installed in or on a compressor subject to these regulations if the installer has a reasonable basis for knowing that it will not adversely affect noise emissions. For noise-related replacement aftermarket parts, a reasonable basis exists if (a) the installer reasonably believes that the replacement part or rebuilt part is designed to perform the same function with respect to noise control as the replaced part, or (b) the replacement part or rebuilt part is represented in writing by the part manufacturer or rebuilder to perform the same function with respect to noise control as the replaced part.

For noise-related add-on, auxiliary, augmenting, or secondary parts or systems, a reasonable basis exists if (a) the installer knows of noise emissions tests which show that the part does not cause noise emissions to exceed the time-of-sale standards, or to increase emissions, if the noise emissions already exceed the time-of-sale standards; or (b) the part or system manufacturer represents in writing that tests have been performed with similar results (to (a) above); or (c) a Federal, State or local environmental control agency with appropriate jurisdiction expressly represents that a reasonable basis exists.

(21) Some commenters indicated that, in the tampering requirement, submission of information 90 days before introduction into commerce of the compressor represents an excessively long time period for the manufacturer.

The 90-day requirement in the proposed regulation was established to allow EPA sufficient time to evaluate the tampering data, prepare a list of the acts which tampering enforcement would focus on, and then forward this list to the manufacturer for incorporation into the owner's manual. However, to account for the varying production schedules of

manufacturers, the final regulation has been changed to allow for a time period based on the need of the manufacturer. The regulation now requires that the manufacturer submit the requested information within an adequate amount of time to provide EPA with 30 days to review the data and return a tampering list to the manufacturer for printing in the owner's manual. If the Administrator fails to provide the list to the manufacturer within 30 days of the date the information was submitted, the manufacturer is not precluded from distributing the compressors into commerce. In this case, the list of tampering acts required in the owner's manual shall be omitted until the list is provided and the owner's manual is otherwise reprinted.

(22) Several commenters considered unreasonable and burdensome the requirements for the submission of listings of noise control devices and elements of design (including performance specifications) and acts which might constitute tampering.

The purpose of these requirements in the proposal was to enable the Administrator to determine what acts will constitute tampering. Information submitted by the manufacturer is not to be considered as a final judgment of what constitutes tampering, but will only provide the basic information for determination by the Administrator. The final regulations have been modified so that no separate submission of the list of noise control devices and elements of design is required; this is part of the information required to be provided in the product verification report. The requirement for submission of noise-related performance specifications has been deleted. The generation of the required information by the manufacturer can be performed concurrently with the development of appropriate noise control systems. The testing that will normally be performed in the development of the noise control systems and the manufacturer's engineering experience should provide a substantial basis from which the required information can be generated.

E. MISCELLANEOUS

(1) One commenter stated that noise regulations directed at the end product are preferable to those for individual component parts.

The Agency has carefully reviewed the possibility of regulating equipment components, for example, an engine as opposed to the total final end product, and reached the conclusion that on a cost effective basis, it is indeed preferable to regulate end products. This is so because in the synthesis of a final product from various regulated components there is no guarantee that the noise emissions of the final product will be within acceptable limits. Accordingly, there probably still would be a need for a final product regulation.

(2) One commenter stated that the regulation should be rewritten to improve the language related to the numerical descriptions of noise.

The Agency has taken the comment under advisement, and, accordingly, changes have been made to the text of the regulation.

(3) One commenter suggested that the definition of portable air compressor should be clarified to exclude any products not intended to be subject to the regulation.

The suggested changes presented by this commenter were studied and the definitions of portable air compressors now appearing in the Regulation incorporated language which the Agency feels adequately defines the product intended for regulation.

IV. CONTINUING AGENCY RESPONSE TO PUBLIC COMMENTS

As mentioned in the foregoing Agency responses to public comments, additional study is required in some areas.

If data collected by or made available to the Agency indicate the existence of any problem curtailing the effectiveness of the regulations, these regulations may be revised pursuant to section 6(c) (3) of the Act.

V. REVISION OF THE PROPOSED REGULATION PRIOR TO PROMULGATION

The portable air compressor noise emission regulation which is now being promulgated incorporates several changes from the proposed regulation which was published on October 29, 1974. These changes are based upon the public comments received and the results of additional studies performed by the Agency to assess the impact of the regulation. In most instances, changes were made to merely clarify the intent of the regulation. However, three substantive changes were made.

(a) EFFECTIVE DATE OF THE REGULATION

In the proposed regulation, the effective date for compliance with the standard was 12 months after promulgation of the Regulation. During the public comment period attendant to the proposed regulation, many comments were received from manufacturers of portable air compressors indicating that the 12-month effective date time period would adversely affect their economic viability because they would not be able to produce units complying with the standard in the specified time frame.

The Agency conducted studies which showed that if the 12-month effective date were maintained, approximately 59 percent of the total industry unit sales volume (amounting to a potential \$86 million loss) might be unavailable for introduction into commerce at the end of the 12-month period with the added effect of potentially causing four smaller or marginally viable firms to withdraw from the market. The Agency reviewed several effective date options with the portable air compressor manufacturers to assess how this potential disruption and withdrawal could be mitigated. Data supplied by manufacturers showed that a 24-month effective date for portable air compressors with a flow capacity less than or equal to 250 cfm and an

effective date of 30 months for units with capacity above 250 cfm would produce no disruption and therefore cause no lost sales for the standard levels considered. From this it may be inferred that the four smaller or marginally viable firms would not withdraw from the market. Agency analysis of the impact of these effective date extensions on the projected health and welfare benefits, to be derived by the proposed regulation, showed an insignificant loss in benefit. The reason for this is that benefits derived from the regulation are based on a 100 percent compressor population replacement by quieted compressors, and since it takes on the average ten years for a compressor to lose its usefulness, the extension of the compliance time by 12 and 18 months, respectively, for the two categories of compressors (≤ 250 cfm, > 250 cfm) would merely mean that the full public health and welfare benefits would be realized in late 1987 and early 1988 as opposed to late 1986. Therefore, the Agency modified the effective date to the 24- and 30-month periods for compliance.

The percent list price increase was previously estimated to be approximately 16 percent for the 12-month effective date initially proposed. Studies further showed that this increase in list prices might cause a 4.6 percent decrease in unit sales volume. The new effective date is estimated to reduce the previously estimated list price increase by 3.7 percentage points to 12.3 percent with an attendant .3 percentage point reduction in the estimated unit sales volume decrease associated with the list price change.

(b) USEFUL LIFE STANDARD

As it appeared in the proposed regulation, the standard for portable air compressors was to extend over the useful life of compressors. The intent behind this requirement was to ensure that the public health and welfare benefits derived from the portable air compressor standard would be fully achieved over time. The Agency maintains that product noise emission levels developed to protect public health and welfare must not degrade during the product's life. However, where degradation cannot be reasonably prevented through periodic preventive maintenance and repair, standards may include a degradation allowance.

Currently, no data are available to determine whether and to what degree the noise from a properly maintained and repaired portable air compressor would degrade in time. Accordingly, the Agency is reserving a section for useful life requirements in the regulation and will defer action on setting a useful life standard until necessary and sufficient data are collected on which to base a standard. The delay in promulgating a useful life standard should not be construed as a deemphasis of this requirement, but merely as a means to assure that an accurate and fair useful life requirement may be imposed.

VI. ENFORCEMENT

A. GENERAL

The EPA enforcement strategy under the Noise Control Act of 1972 will place on the manufacturer the major share of the responsibility for testing to determine the compliance of new portable air compressors with the emission standard. This approach benefits the manufacturer by leaving his personnel in control of many aspects of the compliance program and imposes only a minimum burden on his business. At the same time, the inevitable conflict of interest imposed on the manufacturer makes monitoring by EPA personnel of these tests and manufacturers' actions taken in compliance with these regulations advisable to ensure that compressors distributed in commerce are in fact in compliance with these regulations. Accordingly, the regulations provide that EPA enforcement officers may be present and observe any testing required by these regulations, or the Administrator may require that a manufacturer supply him with compressors for testing either at the manufacturer's facility or at the EPA Enforcement Test Facility. In addition, enforcement officers will be empowered to inspect records and facilities in order to assure that manufacturers are carrying out their responsibilities properly.

The enforcement strategy promulgated today in these regulations consists of three main parts: (1) Production Verification, (2) Selective Enforcement Auditing, and (3) In-use Compliance Provisions. A detailed description of these parts, including other important administrative parts, follows.

B. PRODUCTION VERIFICATION

Production verification is the testing by a manufacturer or EPA of early production models to verify whether a manufacturer has the requisite noise control technology in hand and is capable of applying the technology in a manufacturing process. Models selected for testing must have been assembled using the manufacturer's normal assembly method and must be units assembled for sale. Models tested must conform with the standard or the manufacturer may be required to cease distribution in commerce of compressors of that model.

The production unit selected for testing is of a compressor configuration. A compressor configuration is defined on the basis of compressor type, delivery rate, cooling system, air intake and induction system, engine system, and exhaust system. Most of the testing required by these regulations will be performed by the manufacturer at his test site, using his equipment and personnel, although the Administrator reserves the right to be present to monitor or perform any tests. Production verification does not involve any formal EPA approval or issuance of certificates subsequent to manufacturer testing, nor is any extensive testing required of EPA.

To avoid delays of shipment of early production models, due to weather conditions which preclude testing, these reg-

ulations provide that production verification of a configuration is automatically and conditionally waived for a manufacturer for a period of up to 45 consecutive days from distribution in commerce of the first compressor of that configuration. The manufacturer must test a compressor on the first day weather conditions at his site permit. Failure to test on such first suitable day will result in automatic and retroactive withdrawal of the waiver and will render the manufacturer liable for illegally distributing compressors into commerce.

A manufacturer may production verify a configuration any time during the model year or in advance of a model year, if he desires.

A manufacturer shall verify production compressors by one of two methods. The first method will involve testing of a production compressor (intended for sale) of each configuration.

Alternatively, production verification testing of all configurations produced by a manufacturer may not be required where a manufacturer determines that the noise levels of some configurations are consistently higher than others or are always representative of other configurations. In such a case, the higher emitter would be the only configuration requiring verification testing.

The manufacturer must production verify each model year. In some instances, a manufacturer may verify new models based on data submitted during previous model years.

C. SELECTIVE ENFORCEMENT AUDITING

These regulations provide for sample testing based on an audit of production compressors (Selective Enforcement Auditing). Selective Enforcement Auditing (SEA) is the term used in this regulation to describe the testing pursuant to an administrative request, in accordance with the proposed test procedure, of a statistical sample of production compressors, from a particular compressor category or configuration selected from a particular assembly plant in order to determine whether production compressors conform to the standards and to provide the basis for further action in the case of non-conformity.

The sampling strategy adopted by EPA does not attempt to impose a quality control or quality assurance scheme upon a manufacturer but merely audits the conformity of his products.

A selective enforcement audit is initiated by a test request issued to the manufacturer by the Administrator (or his designated representative). One important factor which will influence the decision of the Administrator to issue a test request is whether the manufacturer is conducting noise emission testing of production compressors on his own cognizance. If a manufacturer can provide evidence that his compressors are meeting standards based on tests and sampling methods acceptable to EPA, issuance of a test request may not be necessary. The criteria for such a sampling plan is discussed in the "Background Document for Portable Air Compressors."

The general type of sampling strategy developed by EPA employs attributes-type sampling plans applied to a specific number of batches. Under inspection by attributes, items are inspected or tested to determine whether they meet the prescribed specification. The basic decision criterion is the number of products whose parameters meet specification rather than the average value of some parameter. The particular criterion for compressors is the noise emission standard established by this regulation.

As applied to compressor noise emissions, the Acceptable Quality Level (AQL) is the maximum percentage of failing compressors that for purposes of sampling inspection can be considered satisfactory, where a compressor is considered a failure if it exceeds the noise emission standard. An AQL of 10 percent was chosen to take into account some test variability and random production errors.

D. LABELING

These regulations require that compressors shall be labeled to provide notice that the compressor conforms to the standards contained herein. The label shall contain a notice of tampering prohibitions in the Act, which prohibit the removal or rendering inoperative of any noise control features which are identified in the owners manual.

E. INSPECTION AND MONITORING

Because of the inevitable conflict of interest which results from any compliance system where a significant part of the regulatory activity is controlled by those being regulated, it is essential that EPA personnel have access to aspects of the system in order to determine whether the requirements of the regulations are being followed and whether conforming compressors are being distributed into commerce. Specifically, the inspection and monitoring activities shall be for the purpose of gathering information to enable the Administrator to satisfy himself that required records are being kept, that products which will be tested are being selected and properly prepared for testing, that tests are being properly conducted and that the manufactured product is one which conforms to the regulations, including the applicable noise emission standard. Such inspection and monitoring activities will include access to (1) facets of the testing program required by the regulations; (2) records, reports, and test results which must be maintained; and (3) facilities (production, test and storage) which are connected with the manufacturing of compressors.

Normally, a minimum of 24 hours prior written or oral notice will be given to a manufacturer by the Director of the Mobile Source Enforcement Division or his representative advising him of any visit of EPA Enforcement Officers. However, the regulation does provide for notice only at the time of the visit, provided the visit is authorized in writing by the Assistant Administrator for Enforcement.

F. RECORD KEEPING

These regulations describe the records and other documents concerning testing of compressors which must be maintained and the retention period.

The regulations require that the manufacturer have available a description of his product line and maintain records on specific individual compressors he has tested. For the most part, these information requirements can be satisfied by keeping on hand updated copies of production verification reports. Additionally, to preclude issuance of test requests under the Selective Enforcement Auditing procedures for compressors that may not be available, the Administrator may request production information for particular compressor models.

G. ADMINISTRATIVE REMEDIES

Section 11(d) (1) of the Act provides that:

Whenever any person is in violation of section 10(a) of this Act, the Administrator may issue an order specifying such relief as he determines is necessary to protect the public health and welfare.

Clearly, this provision of the Act is intended to grant to the Administrator discretionary authority to fashion civil sanctions to supplement the criminal penalties of section 11(a). The regulations provide for two types of civil remedies: (1) Recall orders, and (2) cease to distribute orders.

If compressors have been distributed in commerce which were not designed, built and equipped to conform with these regulations, such act would be a violation of section 10(a) and remedy of such nonconformity would be appropriate. Remedy of the affected compressors might be carried out pursuant to a recall order.

In some instances, the Administrator may wish to issue a cease to distribute order. If a manufacturer fails to properly production verify, the Administrator may issue an order requiring the manufacturer to cease the distribution in commerce of compressors of that category or configuration pending compliance with the production verification requirements. The Administrator will provide the manufacturer notice and the opportunity for a hearing prior to the issuance of such an order.

These regulations also provide for remedy when any manufacturer refuses to allow EPA personnel access to his facility to conduct activities authorized by the regulations. This remedy is in the form of an order issued by the Administrator to cease distribution in commerce of compressors of the specified configuration being manufactured at that facility. The Administrator will provide a manufacturer notice and the opportunity for a hearing prior to the issuance of such an order.

H. EXEMPTIONS

The proposed regulations also outline the procedures by which EPA will administer the granting of exemptions from the prohibitions of the Act to various product manufacturers, pursuant to section

10(b). The substantive scope of the exemption provisions of section 10(b) (1) and (2) are defined and procedures whereby exemptions may be requested are set forth. Exemptions will be granted for testing and national security reasons only. Export exemptions will be automatically effective, without request, upon the proper labeling of the products involved. Testing exemptions must be justified in writing by a sufficient demonstration of appropriateness, necessity, reasonableness, and control. Requests for national security exemptions must be endorsed by an agency of the Federal Government charged with the responsibility for national defense. This would preclude the granting of exemptions for products used for public welfare, such as municipal fire trucks.

I. ENFORCEMENT TEST FACILITY

EPA intends to have operational in early 1976 a Noise Enforcement Test Facility. This facility will be located in Sandusky, Ohio at Plum Brook Station.

EPA intends to conduct confirmatory tests on products already tested by manufacturers in addition to independent compliance testing on products not specifically tested by the manufacturer.

Because some manufacturers may not have available to them a facility which meets the requirements of these regulations, the EPA Enforcement Test Facility would be available, to the extent practicable and necessary, for use by such manufacturers to conduct EPA required testing. Additionally, manufacturers with access to facilities may wish to test or retest some of their products at the EPA Enforcement Test Facility in order to assure themselves that they have successfully production verified their products.

In the instance where compliance testing is conducted at the EPA Enforcement Test Facility at the manufacturer's request, the manufacturer would be charged a fee which is representative of the actual expense to the government.

J. IN-USE COMPLIANCE

The manufacturer is required to design, build and equip compressors subject to these regulations so that they do not exceed the prescribed noise emission standard at the time of distribution and ultimate sale. The requirement that the product be manufactured to meet the standard without degradation over a period of useful life is not presently included in the final regulation due to the lack of adequate data to determine the precise period of useful life and the amount of degradation (if any) which may be allowed to occur with use of the product. However, the Administrator has expressly reserved a section to include the useful life requirement when sufficient data are collected. In-use compliance provisions are included to minimize degradation from initial noise emission levels.

The in-use provisions include a requirement that the manufacturer provide a noise emission warranty to purchasers (required by section 6(d) of the Noise Control Act), provide information

to the Administrator which will assist in fully defining those acts which constitute tampering (under section 10(a) (2) (A) of the Act), and provide retail purchasers with instructions specifying the maintenance, use, and repair required to reasonably assure elimination or minimization of noise level degradation (authorized by section 6(c) (1) of the Act).

Under the warranty provisions, intended to more fully implement 6(d) (1) of the Act, it is required that the manufacturer warrant to the ultimate and subsequent purchasers that new portable air compressors subject to these regulations are designed, built, and equipped so as to conform at the time of sale with the Federal noise control regulations. The manufacturer must furnish this time-of-sale warranty to the ultimate purchaser in a prescribed written form, which will be reviewed by EPA in order that the Agency can determine whether the manufacturer's warranty policy is consistent with the intent of the Act.

The tampering provisions require the manufacturer to furnish a list of acts which may be done to compressors in use and which, if done, are likely to have a detrimental impact on noise emissions. The Administrator will then use this information to develop a final list of those acts which are presumed by EPA to constitute tampering. A statement of the Federal law on tampering, which will include the final list of acts which constitute tampering as determined by EPA, must be provided in written form to the ultimate purchaser.

The sections dealing with instructions for proper maintenance, use, and repair of the compressor are intended to ensure that purchasers know exactly what is required to minimize or eliminate degradation of the noise level of the compressor during its life. These instructions must be both necessary to reasonably assure nondegradation and reasonable in the burden placed on purchasers. A record or log book also must be provided to the ultimate purchaser in order that the purchaser may record maintenance performed during the life of the product. The instructions may not contain language which tends to give the manufacturer or his dealers an unfair competitive advantage over the after-market. Finally, the regulations provide for Agency review of instructions and related language.

VII. IMPACT OF THE REGULATION

Using data and information accrued to develop the proposed regulation, complemented by additional technological and economic data and information made available to the Agency during the public comment periods, the Agency re-evaluated the impact of the portable air compressor regulation being promulgated. Summarized below are the impacts anticipated.

A. NOISE REDUCTION

The average noise level of portable air compressors employed today at construction sites is 88 dBA at 7 meters. Com-

pliance with the standards established for portable compressors with rated air flow capacities of less than or equal to 250 cfm and for those with rated air flow capacities above 250 cfm will reduce compressor noise by an average 12 dBA.

It is estimated that compliance with the portable air compressor regulation will reduce the contribution (on an energy basis) of the portable air compressor to construction site noise from 16.9 percent (in the worst present case) to approximately one percent. It will also decrease the portable air compressor as a source of acoustic energy at a construction site, from the second noisiest source, exceeded only by medium and heavy trucks, to the 16th noisiest piece of equipment comprising the hardware mix of approximately 20 pieces of equipment at a typical construction site. Compliance with this regulation should eliminate the portable air compressor as a major source of noise at construction sites.

B. HEALTH AND PUBLIC WELFARE

It is estimated that over 27.4 million people are exposed to construction site noise levels in excess of Ldn 55, the level identified as protective of public health and welfare with an adequate margin of safety. Compliance with the regulation being promulgated is projected to reduce the severity of impact from construction site noise by approximately 15 percent from current objectionable conditions; concomitant regulation of truck noise to either 83 or 75 dBA at 50 feet, for example, could provide total relief on the order of 37 to 46 percent, respectively. In terms of the acoustic energy contribution to construction site noise, compliance with the regulation will reduce the acoustic energy contribution of portable air compressors to approximately one percent of the total site noise which moves the portable air compressor from the 2nd most predominant construction site noise source to the 16th noisiest piece of construction equipment on a list of 20 pieces of equipment typically used at construction sites. In terms of the actual benefits from the regulation being promulgated, the regulation will reduce the extensity and severity of impact on the entire 27.4 million people exposed to noise levels above 55 Ldn at construction sites by 14.7 percent.

C. COST AND ECONOMIC IMPACT

Analysis of the impact of this regulation included the expected average list price increase for both categories of portable air compressors. For compressors with capacities less than or equal to 250 cfm the estimated average list price increase is 11.2 percent; for compressors with capacities greater than 250 cfm the list price increase may be as much as 13.0 percent. Considering the industry market this is an average list price increase of 12.3 percent.

Based on estimated 1977-1978 and retail sales of \$206 million and estimated increased sales prices of 12.3 percent, the annual aggregate increase in purchase cost is estimated to be \$25.4 million.

Various aspects of potential economic impact were assessed to evaluate changes that may occur due to promulgation of this regulation. Upper and lower bound cost values were used to provide an average case estimate of economic impact. The results of the analysis are:

1. Potential decreases in total sales are estimated to be approximately 4 percent, with the major impact falling on diesel driven compressors with more than 250 cfm capacity. These impacts are equivalent to one to two years of sales growth at the rates experienced by the industry from 1967 to 1972, but are less than one-fifth of the industry sales growth from 1972 to 1973.

2. There should be little effect on upstream component suppliers. Distributors and users may be affected in that alternative sources of compressed air, e.g., electric and hydraulic systems, will become competitive for many present uses of portable compressors.

3. No unemployment is expected to occur as the result of the portable air compressor regulation.

4. Exports are approximately 10 percent of total sales, and no changes in export patterns are expected because of these noise regulations. Imports make up approximately 7 percent of the market and no change is expected due to the standards being promulgated.

5. There will be no impact on the balance of trade.

6. There will be no significant increase in transportation costs from the manufacturers' plant to distribution or end user locations due to these regulations.

VIII. FUTURE INTENT

The Agency is pursuing a strategy through which major contributors to overall construction site noise will be identified and subsequently regulated. This coordinated approach is necessary because in most sites, a number of different construction equipment products may be operating at the same time and the quieting of only one such product may not in itself be sufficient to adequately reduce the noise from the site to a level the Agency believes required to protect the public health and welfare.

As indicated in the EPA Identification of Major Sources of Noise Report (39 FR 22297-99, June 21, 1974), the principal candidates for future regulatory efforts are known. On May 28, 1975, the Agency identified the following pieces of construction equipment as major sources of noise: Wheel and track loaders and dozers (40 FR 23105). At this time the Agency is analyzing the alternative methods of regulating construction equipment to determine whether regulation of individual products or categories of products is more appropriate.

The Agency intends to commence regulatory action on other construction equipment products in the near future, and the levels chosen for the standards in this proposed rulemaking are consistent with the overall requirements to quiet all products in order to ultimately quiet all construction sites.

IX. BACKGROUND DOCUMENT

Notice of the availability of the Document entitled "Background Document For Proposed Portable Air Compressor Noise Emission Regulations" was published in the FEDERAL REGISTER on October 29, 1974 (39 FR 38186). This document has been revised and new data have been added. This new document entitled "Background Document For Portable Air Compressors" is quite lengthy, and it would be impractical to publish it in its entirety in the FEDERAL REGISTER. Copies may be obtained from the EPA Public Information Center, PM-215, Room 2104D, Waterside Mall, 4th and M Streets, SW., Washington, D.C. 20460. To the extent possible, the significant aspects of the material have been presented in summary form in the foregoing preamble.

This regulation is promulgated under the authority of 42 U.S.C. 4905, 86 Stat. 1237.

It is hereby certified that the economic and inflationary impacts of this proposed regulation have been carefully evaluated in accordance with Executive Order 11821.

Dated: December 31, 1975.

JOHN QUARLES,
Acting Administrator.

Part 204 of Title 40 shall read as follows:

Subpart A—General Provisions

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204.1	General applicability.
204.2	Definitions.
204.3	Number and gender.
204.4	Inspection and monitoring.
204.5	Exemptions.
204.5-1	Who may request an exemption.
204.5-2	Testing exemption.
204.5-3	Pre-verification exemptions.
204.5-4	National security exemptions.
204.5-5	Export exemptions.
204.5-6	Granting of exemptions.
204.5-7	Submission of exemption requests.

Subpart B—Portable Air Compressors

204.50	Applicability.
204.51	Definitions.
204.52	Portable air compressor noise emission standards.
204.53	Maintenance of records: Submittal of information.
204.54	Test procedures.
204.55	Production verification.
204.55-1	General standards.
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204.56	Testing by the Administrator.
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204.57-1	Test request.
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Sec.	
204.57-5	Reporting of test results.
204.57-6	Acceptance and rejection of batches.
204.57-7	Acceptance and rejection of batch sequence.
204.57-8	Continued testing.
204.57-9	Prohibition of distribution in commerce; manufacturer's remedy.
204.58	In-use requirements.
204.58-1	Warranty.
204.58-2	Tampering.
204.58-3	Instructions for maintenance, use, and repair.
204.59	Recall of noncomplying compressors.

AUTHORITY: (42 U.S.C. 4905), 86 Stat. 1237.

Subpart A—General Provisions

§ 204.1 General applicability.

The provisions of this subpart are applicable to all products for which regulations have been published under this part and which are manufactured after the effective date of such regulations.

§ 204.2 Definitions.

(a) As used in this subpart, all terms not defined herein shall have the meaning given them in the Act.

(1) "Act" means the Noise Control Act of 1972 (Pub. L. 92-574, 86 Stat. 1234).

(2) "Administrator" means the Administrator of the Environmental Protection Agency or his authorized representative.

(3) "Agency" means the United States Environmental Protection Agency.

(4) "Export exemption" means an exemption from the prohibitions of section 10(a) (1), (2), (3), and (4) of the Act, granted by statute under section 10(b) (2) of the Act for the purpose of exporting regulated products.

(5) "National security exemption" means an exemption from the prohibitions of section 10(a) (1), (2), (3), and (5) of the Act, which may be granted under section 10(b) (1) of the Act for the purpose of national security.

(6) "Pre-verification exemption" means a testing exemption which is applicable to products manufactured prior to product verification, and used by a manufacturer from year to year in the ordinary course of business, for product development, production method assessment, and market promotion purposes, but in a manner not involving lease or sale.

(7) "Testing exemption" means an exemption from the prohibitions of section 10(a) (1), (2), (3), and (5) of the Act, which may be granted under section 10(b) (1) of the Act for the purpose of research, investigations, studies, demonstrations, or training, but not including national security where lease or sale of the exempted product is involved.

(8) "Warranty" means the warranty required by section 6(c) (1) of the Act.

(9) "Tampering" means those acts prohibited by section 10(a) (2) of the Act.

(10) "Maintenance instructions" means those instructions for maintenance, use, and repair, which the Administrator is authorized to require pursuant to section 6(c) (1) of the Act.

(11) "Type I Sound Level Meter" means a sound level meter which meets the Type I requirements of American National Standard Specification S1.4-1971 for sound level meters. This publication is available from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018.

(12) "dBA" is the standard abbreviation for A-weighted sound level in decibels.

(13) "Reasonable assistance" means providing timely and unobstructed access to test products or products and records required by this part and opportunity for copying such records or testing such test products.

(14) "Slow meter response" means the meter ballistics of meter dynamic characteristics as specified by American National Standard S1.4-1971 or subsequent approved revisions.

(15) "Sound level" means the weighted sound pressure level measured by the use of a metering characteristic and weighing A, B, or C as specified in American National Standard Specification for Sound Level Meters S1.4-1971 or subsequent approved revision. The weighting employed must be specified, otherwise A-weighting is understood.

(16) "Sound pressure level" means, in decibels, 20 times the logarithm to the base ten of the ratio of a sound pressure to the reference sound pressure of 20 micropascals (20 micronewtons per square meter). In the absence of any modifier, the level is understood to be that of a root-mean-square pressure.

(17) "Product" means any construction equipment for which regulations have been promulgated under this part and includes "test product."

(18) "Test product" means any product that is required to be tested pursuant to this part.

§ 204.3 Number and gender.

As used in this part, words in the singular shall be deemed to import the plural, and words in the masculine gender shall be deemed to import the feminine and vice versa, as the case may require.

§ 204.4 Inspection and monitoring.

(a) Any inspection or monitoring activities conducted under this section shall be for the purpose of determining: (1) Whether required records are being properly maintained, (2) whether test products are being selected and prepared for testing in accordance with the provisions of these regulations, (3) whether test product testing is being conducted in accordance with these regulations, and (4) whether products being produced for distribution into commerce are as described in the production verification report.

(b) Any manufacturer subject to regulation under this part shall admit or cause to be admitted any Environmental Protection Agency (hereafter EPA) Enforcement Officer during operating hours upon demand after having received 24-hour prior written or oral notification, except as provided for by paragraph (e) of this section, and upon presentation of

credentials and authorization in writing signed by the Director, Mobile Source Enforcement Division or his designee to any of the following:

(1) Any facility or site where any product to be distributed into commerce is manufactured, assembled, or stored;

(2) Any facility or site where any tests conducted pursuant to this part or any procedures or activities connected with such tests are or were performed;

(3) Any facility or site where any test product is present; and

(4) Any facility or site where records, reports, other documents or information required to be maintained or provided to the Administrator are located.

(c) (1) Upon admission to any facility or site referred to in paragraph (b) of this section, any EPA Enforcement Officer shall be allowed:

(i) To inspect and monitor test product manufacture and assembly, selection, storage, preconditioning, noise emission testing, and maintenance, and to verify correlation or calibration of test equipment;

(ii) To inspect products prior to their distribution in commerce;

(iii) To inspect and make copies of any records, reports, documents, or information required to be maintained or provided to the Administrator under the Act;

(iv) To inspect and photograph any part or aspect of any such product and any component used in the assembly thereof that are reasonably related to the purpose of his entry.

(2) Any EPA Enforcement Officer shall be furnished by those in charge of a facility or site being inspected with such reasonable assistance as he may request to help him discharge any function listed in this section. A manufacturer is required to cause those in charge of a facility or site operated for its benefit to furnish such reasonable assistance without charge to EPA whether or not it controls the facility.

(3) The duty to admit or cause to be admitted any EPA Enforcement Officer applies whether the facility or site is owned or controlled by the manufacturer or by one who acts for the manufacturer and applies both to domestic and foreign manufacturer facilities and sites. EPA will not attempt to make any inspections which it has been informed that foreign law forbids. However, if foreign law makes it impossible to do what is necessary to ensure the accuracy of data generated at a facility, no informed judgment that a product has been properly tested in accordance with these regulations can properly be based on that data. It is the responsibility of the manufacturer to locate its testing and manufacturing facilities in jurisdictions where this situation will not arise.

(d) For purposes of this section:

(1) "Presentation of credentials" shall mean display of the document designating a person as an EPA Enforcement Officer.

(2) Where test product storage areas or facilities are concerned, "operating hours" shall mean all times during which personnel other than custodial person-

nel are at work in the vicinity of the area or facility and have access to it.

(3) Where facilities or areas other than those covered by paragraph (d) (2) of this section are concerned, "operating hours" shall mean all times during which product manufacture or assembly is in operation or all times during which product testing or maintenance, production, or compilation of records is taking place, or any other procedure or activity related to production verification testing, selective enforcement audit testing or to product manufacture or assembly is being carried out.

(e) Any entry without 24 hour prior written or oral notification to the affected manufacturer shall be authorized in writing by the Assistant Administrator for Enforcement.

(f) (1) Pursuant to section 11(d) (1) of the Act, the Administrator may issue an order to the manufacturer to cease the distribution in commerce of particular products being manufactured at a particular facility if:

(i) Any EPA Enforcement Officer is denied the access required in paragraph (b) and (c) of this section.

(ii) Any EPA Enforcement Officer is denied "reasonable assistance" (as defined in § 204.1(a) (13)).

(2) The sanction of issuing an order to cease distribution of products into commerce may be imposed for the reasons in paragraph (f) (1) (i) and (ii) of this section only when the infraction is substantial.

(3) Any such order shall be issued only after notice and opportunity for a hearing.

§ 204.5 Exemptions.

§ 204.5-1 Who may request an exemption.

(a) Any manufacturer may request an exemption provided by this subpart or exempt products as provided by § 204.5-5.

§ 204.5-2 Testing exemption.

(a) Any manufacturer requesting a testing exemption must demonstrate that the proposed test program:

(1) Has a purpose which constitutes an appropriate basis for an exemption in accordance with section 10(b) (1) of the Act;

(2) Necessitates the granting of an exemption;

(3) Exhibits reasonableness in scope; and

(4) Exhibits a degree of control consonant with the purpose of the program and the Environmental Protection Agency's monitoring requirements. Paragraphs (b), (c), (d), and (e) of this section describe what constitutes a sufficient demonstration for each of the four above identified elements.

(b) With respect to the purpose of the proposed test program, an appropriate purpose is one which is consistent with one or more of the basis for exemption set forth under section 10(b) (1), namely research, investigations, studies, demonstrations, or training, but not including national security. (See § 204.5-4.) A con-

cise statement of purpose is a required item of information.

(c) With respect to the necessity that an exemption be granted, necessity arises from an inability to achieve the stated purpose in a practicable manner without performing a prohibited act under sections 10(a) (1), (2), (3), or (5). In appropriate circumstances time constraints may be a sufficient basis for necessity.

(d) With respect to reasonableness, a test program must exhibit a duration of reasonable length and affect a reasonable number of products. In this regard, required items of information include:

(1) An estimate of the program's duration;

(2) The absolute number of products involved;

(3) The duration of the test;

(4) The ownership arrangement with regard to the products involved in the test;

(5) The intended final disposition of the products;

(6) The means or procedure whereby test results will be recorded.

(e) Paragraph (a) of this section applies irrespective of the product's place of manufacture.

§ 204.5-3 Pre-verification exemptions.

Section 204.5-2 does not apply for pre-verification products. In such cases, a request for exemption is also necessary; however, the only information required is a statement setting forth the general nature of the pre-verification products program, the number of products involved and a demonstration that adequate record keeping procedures for control purposes will be employed.

§ 204.5-4 National security exemptions.

A manufacturer requesting a national security exemption must state the purpose for which the exemption is required, and the request must be endorsed by an agency of the Federal government charged with responsibility for national defense.

§ 204.5-5 Export exemptions.

(a) A new product intended solely for export, and so labeled or marked on the outside of the container and on the product itself, shall be exempt from the prohibitions of section 10(a), (1), (2), (3), and (4) of the Act.

(b) No request for an export exemption is required.

(c) It is a condition of any export exemption under section 10(b) (2) that such exemption shall be void *ab initio* with respect to each new product intended solely for export which is distributed in commerce for use in any state.

(d) Any manufacturer or person subject to the liabilities of section 11(a) with respect to any product, originally intended for export, but distributed in commerce for use in any state, may be excluded from the application of section 11(a) with respect to such product based upon a showing that such manufacturer:

(1) Had no knowledge of such product being distributed in commerce for use in any state; and

(2) Made reasonable efforts to ensure that such product would not be distributed in commerce for use in any state. Such reasonable efforts would include investigations, prior dealings, contract provisions, etc.

§ 204.5-6 Granting of exemptions.

(a) If upon completion of the review of an exemption request, the granting of an exemption is deemed appropriate, a memorandum of exemption will be prepared and submitted to the manufacturer requesting the exemption. The memorandum will set forth the basis for the exemption, its scope, and such terms and conditions as are deemed necessary to protect the public health and welfare. Such terms and conditions will generally include, but are not limited to, agreements by the applicant to conduct the exempt activity in the manner described to EPA, create and maintain adequate records accessible to EPA at reasonable times, employ labels for the exempt products setting forth the nature of the exemption, take appropriate measures to assure that the terms of the exemption are met, and advise EPA of the termination of the activity and the ultimate disposition of the products. EPA may limit the scope of any exemption by placing restrictions on time, location and duration. EPA may also withdraw the exemption at any time, based upon information that the public health and welfare is being endangered.

(b) Any exemption granted pursuant to paragraph (a) of this section shall be deemed to cover any subject product only to the extent that the specified terms and conditions are complied with. A breach of any term or condition shall cause the exemption to be void *ab initio* with respect to any product. Consequently, the distribution in commerce for use of any subject product other than in strict conformity with all terms and conditions of this exemption shall constitute a violation of section 10(a) (1) and (3) of the Act, and shall render the manufacturer to whom the exemption is granted, and any other person to whom the provisions of section 10 are applicable, liable to sanction under sections 11 and 12 of the Act.

§ 204.5-7 Submission of exemption requests.

Requests for exemption or further information concerning exemptions and/or the exemption request review procedure should be addressed to:

Director, Mobile Source Enforcement Division (EN-340), Environmental Protection Agency, 401 M Street SW, Washington, D.C. 20460.

Subpart B—Portable Air Compressors

§ 204.50 Applicability.

The provisions of this subpart shall apply to portable air compressors which are manufactured after the effective dates specified in § 204.52, and which are "New Products" as defined in the Act. These provisions apply only to portable air compressors with a rated capacity equal to or above 75 cubic feet per minute which deliver air at pressures

greater than 50 psig. The provisions do not apply to the pneumatic tools or equipment that the portable air compressor is designed to power.

§ 204.51 Definitions.

(a) "Portable air compressor" or "compressor" means any wheel, skid, truck, or railroad car mounted, but not self-propelled, equipment designed to activate pneumatic tools. This consists of an air compressor (air end), and a reciprocating rotary or turbine engine rigidly connected in permanent alignment and mounted on a common frame. Also included are all cooling, lubricating, regulating, starting, and fuel systems, and all equipment necessary to constitute a complete, self-contained unit with a rated capacity of 75 cfm or greater which delivers air at pressures greater than 50 psig, but does not include any pneumatic tools themselves.

(b) "Maximum Rated Capacity" means that the portable air compressor, operating at the design full speed with the compressor on load, delivers its rated cfm output and pressure, as defined by the manufacturer.

(c) "Model year" means the manufacturer's annual production period which includes January 1 of such calendar year; Provided, that if the manufacturer has no annual production period, the term "model year" shall mean the calendar year.

(d) "Compressor configuration" means the basic classification unit of a manufacturer's product line and is comprised of compressor lines, models or series which are identical in all material respects with regard to the parameters listed in § 204.55-3.

(e) "Category" means a group of compressor configurations which are identical in all aspects with respect to the parameters listed in paragraph (c) (1) (i) of § 204.55-2.

(f) "Production verification compressor" means any compressor selected for testing, tested, or verified pursuant to the requirements of this subpart.

(g) "Noise emission test" means a test conducted pursuant to the measurement methodology specified in § 204.54.

(h) "Inspection Criteria" means the rejection and acceptance numbers associated with a particular sampling plan.

(i) "Acceptable Quality Level (AQL)" means the maximum percentage of failing compressors that, for purposes of sampling inspection can be considered satisfactory as a process average.

(j) "Batch" means the collection of compressors of the same category or configuration, as designated by the Administrator in a test request, from which a batch sample is to be randomly drawn and inspected to determine conformance with the acceptability criteria.

(k) "Batch sample" means the collection of compressors of the same category or configuration from which test samples are randomly drawn.

(l) "Batch sample size" means the number of compressors of the same category or configuration in a batch sample.

(m) "Test sample" means the collection of compressors from the same category or configuration which is randomly

drawn from the batch sample and which will receive emissions tests.

(n) "Batch size" means the number, as designated by the Administrator in the test request, of compressors of the same category or configuration in a batch.

(o) "Test sample size" means the number of compressors of the same configuration in a test sample.

(p) "Acceptance of a batch" means that the number of non-complying compressors in the batch sample is less than or equal to the acceptance number as determined by the appropriate sampling plan.

(q) "Rejection of a batch" means that the number of non-complying compressors in the batch sample is greater than or equal to the rejection number as determined by the appropriate sampling plan.

(r) "Acceptance of a batch sequence" means that the number of rejected batches in the sequence is less than or equal to the sequence acceptance number as determined by the appropriate sampling plan.

(s) "Rejection of a batch sequence" means that the number of rejected batches in a sequence is greater than or equal to the sequence rejection number as determined by the appropriate sampling plan.

(t) "Shift" means the regular production work period for one group of workers.

(u) "Failing compressor" means that the measured noise emissions of the compressor, when measured in accordance with the applicable procedure, exceeds the applicable standard.

(v) "Acceptance of a compressor" means that the measured noise emissions of the compressor, when measured in accordance with the applicable procedure, conforms to the applicable standard.

(w) "Test Compressor" means a compressor in the test sample or a production verification compressor.

(x) "Tampering" means those acts prohibited by section 10(a)(2) of the Act.

§ 204.52 Portable air compressor noise emission standard.

(a) Effective January 1, 1978, portable air compressors with maximum rated capacity of less than or equal to 250 cubic feet per minute (cfm) shall not produce an average sound level in excess of 76 dBA when measured and evaluated according to the methodology provided by this regulation.

Effective July 1, 1978, portable air compressors with maximum rated capacity greater than 250 cfm shall not produce an average sound level in excess of 76 dBA when measured and evaluated according to the methodology provided by this regulation.

(b) In-Use Standard [Reserved]

(c) Low Noise Emission Product [Reserved]

§ 204.53 Maintenance of records: Submittal of information.

(a) The manufacturer of any new compressor subject to any of the standards or procedures prescribed in this sub-

part shall establish, maintain, and retain the following adequately organized and indexed records:

(1) *General records.* (i) Identification and description by category and configuration parameters of all compressors comprising the manufacturer's product line, including the identification and description of all devices incorporated into the compressor for the purpose of noise control and attenuation.

(ii) A description of any procedures, other than those contained in these regulations, used to perform noise tests on any test compressor.

(iii) A record of the calibration of the acoustical instrumentation, as required by § 204.54.

(2) *Individual records for test compressors.* (i) A complete record of all noise emission tests performed (except tests performed by EPA directly), including all individual worksheets and/or other documentation relating to each test, or exact copies thereof.

(ii) A record and description of all repairs, maintenance, and other servicing performed, giving the date and time of the maintenance or service, the reason for it, the person authorizing it, and the names of supervisory personnel responsible for the conduct of the maintenance or service.

(3) A properly filed production verification report following the format prescribed by the Administrator fulfills the requirements of paragraphs (a) (1) (i), (ii), (iii) and (a) (2) (i) and (ii) of this section.

(4) All records required to be maintained under this part shall be retained by the manufacturer for a period of three (3) years from the production verification date. Records may be retained as hard copy or alternatively reduced to microfilm, punch cards, etc., depending on the record retention procedures of the manufacturer; however, if an alternative method is to be used, all of the information contained in the hard copy shall be retained.

(b) The manufacturer shall, pursuant to a request made by the Administrator, submit to the Administrator the following information with regard to new compressor production:

(1) Number of compressors, by category or configuration, scheduled for production for the time period designated in the request.

(2) Number of compressors, by category or configuration, produced during the time period designated in the request.

§ 204.54 Test procedures.

(a) *General.* This section prescribes the conditions under which noise emission standard compliance testing must be conducted and the measurement procedures that must be used to measure the sound level and to calculate the average sound level of portable air compressors on which the test is conducted.

(b) *Test site description.* The location for measuring noise employed during noise compliance testing must consist of an open site above a hard reflecting plane. The reflecting plane must consist of a surface of sealed concrete or sealed

asphalt and must extend one (1) meter beyond each microphone location. No reflecting surface, such as a building, sign board, hillside, etc., shall be located within 10 meters of a microphone location.

(c) *Measurement equipment.* The measurement equipment must be used during noise standard compliance testing and must consist of the following or its equivalent:

(1) A sound level meter and microphone system that conform to the Type I requirements of American National Standard (ANS) S1.4-1971, "Specification for Sound Level Meters," and to the requirements of the International Electrotechnical Commission (IEC) Publication No. 179, "Precision Sound Level Meters."

(2) A windscreen must be employed with the microphone during all measurements of portable air compressor noise when the wind speed exceeds 11 km/hr. The windscreen shall not affect the A-weighted sound levels from the portable air compressor in excess of ± 0.5 dB.

(3) The entire acoustical instrumentation system including the microphone and cable shall be calibrated before each test series and confirmed afterward. A sound level calibrator accurate to within ± 0.5 dB shall be used. A calibration of the instrumentation shall be performed at least annually using the methodology of sufficient precision and accuracy to determine compliance with ANS S1.4-1971 and IEC 179. This calibration shall consist, at a minimum, of an overall frequency response calibration and an attenuator (gain control) calibration plus a measurement of dynamic range and instrument noise floor.

(4) An anemometer or other device accurate to within ± 10 percent shall be used to measure wind velocity.

(5) An indicator accurate to within ± 2 percent shall be used to measure portable air compressor engine speed.

(6) A gauge accurate to within ± 5 percent shall be used to measure portable compressor air pressure.

(7) A metering device accurate to within ± 10 percent shall be used to measure the portable air compressor compressed air volumetric flow rate.

(8) A barometer for measuring atmospheric pressure accurate to within ± 5 percent.

(9) A thermometer for measuring temperature accurate to within ± 1 degree.

(d) *Portable air compressor operation.* The portable air compressor must be operated at the design full speed with the compressor on load, delivering its rated flow and output pressure, during noise emission standard compliance testing. The air discharge shall be provided with a resistive loading such that no significant pressure drop or throttling occurs across the compressor discharge valve. The air discharge shall be piped clear of the test area or fed into an effective silencer. The sound pressure level due to the air discharge shall be at least 10 dB below the sound pressure level generated by the portable air compressor.

(e) *Test conditions.* Noise standard compliance testing must be carried out under the following conditions:

(1) No rain or other precipitation,

(2) No wind above 19 km/hr,

(3) No observer located within 1 meter, in any direction, of any microphone location, nor between the test unit and any microphone,

(4) Portable air compressor sound levels, at each microphone location, 10 dB or greater than the background sound level,

(5) The machine shall have been warmed up and shall be operating in a stable condition as for continuous service and at its maximum rated capacity. All cooling air vents in the engine/compressor enclosure, normally open during operation, shall be fully open during all sound level measurements. Service doors that should be closed during normal operation (at any and all ambient temperatures) shall be closed during all sound level measurements.

(f) *Microphone locations.* Five microphone locations must be employed to acquire portable air compressor sound levels to test for noise standard compliance. A microphone must be located 7 ± 1 meters from the right, left, front, and back sides and top of the test unit. The microphone position to the right, left, front, and back sides of the test unit must be located 1.5 ± 1 meters above the reflecting plane.

(g) *Data required.* The following data must be acquired during noise emission standard compliance testing:

(1) A-weighted sound level at one microphone location prior to operation of the test unit and at all microphone locations during test unit operations, as defined in section (d).

(2) Portable air compressor engine speed.

(3) Portable air compressor compressed gas pressure.

(4) Portable air compressor flow rate.

(5) All other data contained on Appendix I, Table IV.

(h) *Calculation of average sound level.* The average A-weighted sound level from measurements at the specified microphone locations must be calculated by the following method:

$$\bar{L} = 10 \log \frac{1}{n} \left[\text{antilog} \frac{L_1}{10} + \text{antilog} \frac{L_2}{10} + \dots + \text{antilog} \frac{L_n}{10} \right]$$

where:

$\bar{L}$ = average A-weighted sound level, in decibels,

L = A-weighted sound level, in decibels,

L_n = A-weighted sound levels, in decibels,

n = number of measuring positions.

(i) The Administrator may approve applications from manufacturers of portable air compressors for the approval of test procedures which differ from those contained in this Part so long as the alternate procedures have been demonstrated to correlate with the prescribed procedure. To be acceptable, alternate testing procedures shall be such that the test results obtained will identify all those test units which would not comply with the noise emission limit prescribed in § 204.52 when tested in accordance with the procedures contained in § 204.54(a)-(h). Tests conducted by manufacturers under approved alter-

nate procedures may be accepted by the Administrator for all purposes, including, but not limited to, production verification testing, selective enforcement audit testing, and quality control or quality assurance testing on the manufacturer's own cognizance.

(j) *Presentation of information.* All information required by this section may be recorded using the format recommended on the Noise Data Sheet shown in Appendix I, Table IV.

§ 204.55 Production verification.

§ 204.55-1 General standards.

(a) Every new compressor manufactured for distribution in commerce in the United States which is subject to the standards prescribed in this subpart and not exempted in accordance with § 204.5:

(1) Shall be verified in accordance with the production verification procedures described in this subpart;

(2) Shall be represented in a production verification report, as required by § 204.55-4;

(3) Shall be labeled in accordance with the requirements of § 204.55-8; and

(4) Shall conform to the applicable noise emission standard established in § 204.52

§ 204.55-2 Production verification; compliance with standards.

(a) (1) Prior to distribution in commerce of compressors of a specific configuration, such configuration must have undergone production verification in accordance with the requirements of this subpart. Except, that production verification of a configuration is automatically and conditionally waived by the Administrator without request by a manufacturer for a period of up to 45 consecutive days from the date of distribution in commerce by the manufacturer of the first compressor of that configuration in order to enable a manufacturer to distribute compressors in commerce and thus avoid disruption of the manufacturing process: *Provided*, That a manufacturer conducts the necessary tests required in paragraph (b) and/or (c) of this section as soon as weather conditions at a manufacturer's test facility permit after distribution in commerce of the first compressor of a configuration. Failure to test on such first suitable day will result in automatic and retroactive rescission of the waiver and will render the manufacturer liable for illegally distributing compressors in commerce.

(2) At the completion of any 45-day period the conditional production verification granted under paragraph (a) (1) of this section is rescinded for that configuration unless the manufacturer has complied with the requirements of paragraph (b) and/or (c) of this section as appropriate; Except, that upon application by a manufacturer and a showing that the weather conditions at the manufacturer test facility or other conditions beyond the control of the manufacturer made it impossible to conduct the required testing and such conditions are documented by the manufacturer and submitted with an application, the

Administrator, at his option, may extend, for a specified period (not to exceed 45 days), conditional production verification for a configuration to enable the manufacturer to comply with the requirements of paragraph (b) and/or (c) of this section or he may require that the manufacturer ship the test compressor to the EPA test facility for testing by the Administrator.

(b) Production verification requirements with regard to each compressor configuration consist of:

(1) Testing in accordance with § 204.54 of a compressor selected in accordance with § 204.55-5.

(2) Compliance of the test compressor with the applicable standards when tested in accordance with § 204.54.

(3) Submission of a production verification report pursuant to § 204.55-4.

(c) (1) In lieu of testing compressors of every configuration, as described in paragraph (b) of this section, the manufacturer may elect to verify the configuration based on representative testing, the requirements of which consist of:

(i) Grouping configurations into a category where each category will be determined by a separate combination of at least the following parameters (a manufacturer may use more parameters):

- (A) Engine type
 - (1) Gasoline—two stroke cycle
 - (2) Gasoline—four stroke cycle
 - (3) Diesel—two stroke cycle
 - (4) Diesel—four stroke cycle
 - (5) Rotary—Wankel
 - (6) Turbine
 - (7) Other
- (B) Engine manufacturer
- (C) Compressor delivery rate (at rated pressure)

(ii) Identifying the configuration within each category which emits the highest sound level in dBA based on best technical judgment, emission test data, or both.

(iii) Testing in accordance with § 204.54 of a compressor selected in accordance with § 204.55-5 which must be a compressor of the configuration which is identified pursuant to paragraph (c) (1) (ii) of this section as having the highest sound level (estimated or actual) within the category;

(iv) Compliance of the test compressor with applicable standards when tested in accordance with § 204.54; and

(v) Submission of a production verification report pursuant to § 204.55-4.

(2) Where the requirements of paragraph (c) (1) of this section are complied with, all those configurations contained within a category are considered represented by the tested compressor and are considered to be production verified.

(3) Where the manufacturer tests a compressor configuration which has not been determined as having the highest sound level of a category, but all other requirements of paragraph (c) (1) of this section are complied with, all those configurations contained within that category which are determined to have

sound levels no greater than the tested compressor are considered to be represented by the tested compressor and are considered to be production verified. However, a manufacturer must production verify according to the requirements of paragraph (b) (1) and/or (c) (1) of this section any configurations in the subject category which have a higher sound level than the compressor configuration tested.

(d) A manufacturer may elect to production verify using representative testing, pursuant to paragraph (c) of this section, all or part of his product line.

(e) The manufacturer may, at his option, proceed with any of the following alternatives with respect to any compressor determined not in compliance with applicable standards:

(1) Delete that configuration from the production verification report. Configurations so deleted may be included in a later report under § 204.55-4. However, in the case of representative testing, a new test compressor from another configuration must be selected and production verified according to the requirements of paragraph (c) of this section in order to production verify the configurations represented by the non-compliant compressor.

(2) Modify the test compressor and demonstrate by testing that it meets applicable standards. All modifications and test results must be reported in the production verification report. The manufacturer must modify all production compressors of the same configuration in the same manner as the test compressor before distribution into commerce.

(f) Upon oral or written request by Director, Mobile Source Enforcement Division, the manufacturer shall notify such Director of any production verification testing scheduled by the manufacturer pursuant to this section so that EPA Enforcement Officers may be present and observe such testing or conduct the testing in lieu of the manufacturer.

§ 204.55-3 Configuration identification.

(a) A separate compressor configuration shall be determined by each combination of the following parameters:

- (1) The compressor type (screw, sliding vane, etc.)
- (2) Number of compressor stages
- (3) Maximum pressure (psi)
- (4) Air intake system of compressor:
 - (i) Number of filters
 - (ii) Type of filters
- (5) The engine system:
 - (i) Number of cylinders and configuration (L-6, V-8, V-12)
 - (ii) Displacement
 - (iii) Horsepower
 - (iv) Full load rpm
 - (6) Type cooling system, e.g., air cooled, water cooled;
 - (7) Fan:
 - (i) Diameter
 - (ii) Maximum fan rpm
 - (8) The compressor enclosure:
 - (i) Height, length, and width
 - (ii) Acoustic material manufacturer, type, part number
 - (9) The induction system (engine):

- (i) Natural
- (ii) Turbocharged
- (10) The muffler:
 - (i) Manufacturer
 - (ii) Manufacturer part number
 - (iii) Quantity of mufflers used
- (11) Category parameters listed at § 204.55-2.

§ 204.55-4 Production verification report; required data.

(a) The manufacturer shall submit a production verification report to the Director, Mobile Source Enforcement Division (EN-340), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460. A manufacturer may choose to submit separate production verification reports for different parts of his product line.

(b) The report shall be signed by an authorized representative of the manufacturer and shall include the following:

(1) The name, location, and description of the manufacturer's noise emission test facilities which meet the specification of § 204.54 and have been utilized to conduct testing pursuant to this subpart; Except, that a test facility that has been described in a previous submission under this subpart need not again be described but must be identified as such.

(2) A description of normal predelivery maintenance procedure.

(3) A description of all compressor configurations, as determined in accordance with § 204.55-3, to be distributed in commerce by the manufacturer, including a list identifying or defining any device or element of design (including its location and method of operation) incorporated into compressors for the purpose of noise control and attenuation, including any device that affects noise emission from the compressor and does not operate during the normal operating modes of the compressor (e.g., over temperature protection). The manufacturer may satisfy the compressor configuration description requirements of this paragraph by submitting as part of the production verification report a copy of his sales data literature that describes his product line including options: *Provided*, That this literature is supplemented with any additional information to fulfill the requirements of this section. If a manufacturer elects to production verify pursuant to § 204.55-2(c) the configuration, within each category, which is estimated to have the highest sound level shall be identified. The manufacturer may estimate the average sound level based on his best technical judgment and/or data. The criteria used to estimate each sound level shall be stated with the estimates.

(4) The following information for each test conducted:

(i) The completed data sheet required by § 204.54 for all official tests conducted in accordance with § 204.55-7, including for each invalid test and the reason for invalidation.

(ii) A complete description of any preparation, maintenance or testing, which was performed on the test compressor and which will not be performed on all other production compressors.

(iii) The reason for replacement, where a replacement compressor was necessary, and test results, if any, for replaced compressors.

(5) The following statement and endorsement:

This report is submitted pursuant to section 6 and section 13 of the Noise Control Act of 1972. All testing for which data is reported herein is conducted in strict conformance with applicable regulations under 40 CFR Part 204 *et seq.* All the data reported herein are a true and accurate representation of such testing. All other information reported herein is, to the best of (company name) knowledge, true and accurate. I am aware of the penalties associated with violations of the Noise Control Act of 1972 and the regulations thereunder.

(authorized representative)

(c) Where a manufacturer elects to submit separate production verification reports for portions of his product line, as provided for in paragraph (a) of this section, information provided in previous reports need not be resubmitted; Except, that information necessary to update or make current previously submitted information must be submitted.

(d) Any change with respect to information reported pursuant to this subpart shall be reported as soon as the information becomes available.

§ 204.55-5 Test compressor sample selection.

(a) A test compressor of a configuration for which production verification testing is required by § 204.55-2 shall be a compressor of the subject configuration which has been assembled using the manufacturer's normal production processes and which will be sold or offered for sale in commerce.

§ 204.55-6 Test compressor preparation.

(a) Prior to the official test, the test compressor selected in accordance with § 204.55-5 shall not be prepared, tested, modified, adjusted, or maintained in any manner unless such adjustments, preparations, modifications and/or tests are part of the manufacturer's prescribed manufacturing and inspection procedures and are documented in the manufacturer's internal compressor assembly and inspection procedures or unless such adjustments and/or tests are required or permitted under this subpart or are approved in advance by the Administrator. The manufacturer may perform adjustments, preparations, modifications and/or tests normally performed by a dealer to prepare the compressor for delivery to a customer or the adjustments, preparations, modifications and/or tests normally performed at the port-of-entry by the manufacturer to prepare the compressor for delivery to a dealer or customer.

(b) Equipment or fixtures necessary to conduct the test may be installed on the compressor: *Provided*, That such equipment or fixtures shall have no effect on the noise emissions of the compressor, as determined by the appropriate measurement methodology.

(c) In the event of compressor malfunction (i.e., failure to start, misfiring

cylinder, etc.), the manufacturer may perform the maintenance necessary to enable the compressor to operate in a normal manner: *Provided*, That such maintenance is documented and reported in the final report prepared and submitted in accordance with this subpart.

(d) No quality control, testing, assembly, or selection procedures shall be used on the completed test compressor or any portion thereof, including parts and sub-assemblies, that will not normally be used during the production and assembly of all other compressors of that category which will be distributed in commerce, unless such procedures are required or permitted under this subpart or are approved in advance by the Administrator.

§ 204.55-7 Testing.

(a) The manufacturer shall conduct one valid test in accordance with the test procedures specified in § 204.54 for each compressor selected for verification testing.

(b) No maintenance will be performed on test compressors, except as provided for by § 204.55-6. In the event a compressor is unable to complete the emission test, the manufacturer may replace the compressor. Any replacement compressor will be a production compressor of the same configuration as the replaced compressor or a noisier configuration and will be subject to all the provisions of these regulations. Any replacement shall be reported in the production verification report including the reason for the replacement.

(c) In the event a compressor fails to comply with the standards of this subpart when tested in accordance with the procedures specified in paragraph (a) of this section, the manufacturer may proceed in accordance with § 204.55-2(e).

§ 204.55-8 Labeling.

(a)(1) The manufacturer of any compressor subject to the standards prescribed in § 204.52 shall, at the time of manufacture, affix a permanent, legible label, of the type and in the manner described below, containing the information hereinafter provided, to all such compressors to be distributed in commerce.

(2) The label shall be permanently attached, in a readily visible position, on the compressor enclosure.

(3) The label shall be affixed by the compressor manufacturer, who has verified such compressor, in such a manner that it cannot be removed without destroying or defacing the label, and shall not be affixed to any equipment that is easily detached from such compressor.

(4) The label shall contain the following information lettered in the English language in block letters and numerals, which shall be of a color that contrasts with the background of the label:

(i) The label heading: Compressor Noise Emission Control Information;

(ii) Full corporate name and trademark of manufacturer;

(iii) Date of manufacture;

(iv) The statement:

This Compressor Conforms to U.S. E.P.A. Regulations for Noise Emissions Applicable to Portable Air Compressors. The following acts or the causing thereof by any person are prohibited by the Noise Control Act of 1972:

(A) The removal or rendering inoperative, other than for the purpose of maintenance, repair, or replacement, of any noise control device or element of design (listed in the owner's manual) incorporated into this compressor in compliance with the Noise Control Act;

(B) The use of this compressor after such device or element of design has been removed or rendered inoperative.

(b) Compressors manufactured solely for use outside the United States shall be clearly labeled "For Export Only."

§ 204.55-9 Addition of, changes to and deviation from a compressor configuration during the model year.

(a) Any change to a configuration with respect to any of the parameters stated in § 204.55-3 shall constitute the addition of a new and separate configuration or category to the manufacturer's product line.

(b)(1) When a manufacturer introduces a new category or configuration to his product line, he shall proceed in accordance with § 204.55-2.

(2) If the configuration to be added can be grouped within a verified category and the new configuration is estimated to have a lower sound level than a previously verified configuration within the same category, the configuration shall be considered verified: *Provided*, That the manufacturer submits a report pursuant to § 204.55-4 with respect to such configuration.

§ 204.55-10 Production verification based on data from previous model years.

(a) Production verification of each configuration will be required at the beginning of each model year, except that in certain instances the Administrator, upon request by the manufacturer, may permit the use of production verification data for specific configurations from previous production verification reports. Considerations relevant to his decision are:

(1) The standard in effect for the model years in question;

(2) Performance based on production verification data for previous years;

(3) Performance based on data obtained from selective enforcement testing during previous model years; and

(4) The number and type of noise emission design changes incorporated into the new models.

§ 204.55-11 Cessation of distribution.

(a) If a category or configuration is found to be in nonconformity with these regulations by reason of failure to be properly production verified, as required by § 204.55-2, the Administrator may issue an order to the manufacturer to cease to distribute in commerce compressors of that category or configuration: *Provided, however*, That such an

order shall not be issued if the manufacturer has made a good faith attempt to properly production verify the category or configuration. The burden of establishing such good faith shall rest with the manufacturer.

(b) Any such order shall be issued after notice and opportunity for a hearing.

§ 204.56 Testing by the Administrator.

(a) (1) The Administrator may require that any compressor tested or scheduled to be tested pursuant to these regulations or any other untested compressors be submitted to him, at such place and time as he may designate, for the purpose of conducting tests in accordance with the test procedures described in § 204.54 to determine whether such compressors conform to applicable regulations.

(2) The Administrator may specify that he will conduct such testing at the manufacturer's facility, in which case instrumentation and equipment of the type required by these regulations shall be made available by the manufacturer for test operations. The Administrator may conduct such tests with his own equipment, which shall be equal to or exceed the performance specifications of the instrumentation or equipment specified by the Administrator in these regulations.

(b) (1) If, based on tests conducted by the Administrator, the Administrator determines that the test facility is inappropriate for conducting the tests required by this part, he will notify the manufacturer in writing of his determination and the reasons therefor.

(2) After the notification in paragraph (b) (1) of this section, no data derived from the subject test facility will be acceptable for the purposes of this Part and the Administrator may issue an order to the manufacturer, with respect to the compressor category or configuration in question, to cease to distribute in commerce compressors of such category or configuration; Except, that any such order shall be issued only after notice and opportunity for a hearing. Such notification may be included in any notifications under paragraph (b) (1) of this section. A manufacturer may request that the Administrator grant a hearing; request shall be made not later than fifteen (15) days, or other such period as may be allowed by the Administrator, subsequent to notification of the Administrator's intent to issue an order to cease to distribute.

(3) The manufacturer may request in writing that the Administrator reconsider his determination in paragraph (b) (1) of this section based on data or information which indicates that changes have been made to the test facility and such changes have resolved the reasons for disqualification.

(4) The Administrator will notify the manufacturer of his determination with regard to the requalification of the test facility within 10 days of the manufacturer's request for reconsideration pursuant to paragraph (b) (3) of this section.

(c) (1) Whenever the Administrator conducts a test on a test compressor, the results of that test shall constitute the official test data for that compressor.

(2) The Administrator may accept the manufacturer's test data in lieu of his data upon a showing by the manufacturer that the data acquired under paragraph (a) of this section are erroneous and that the manufacturer's data are correct.

§ 204.57 Selective enforcement auditing.

§ 204.57-1 Test request.

(a) The Administrator will request all testing under this subpart by means of a test request addressed to the manufacturer.

(b) The test request will be signed by the Assistant Administrator for Enforcement or his designee. The test request will be delivered by an EPA Enforcement Officer to the plant manager or other responsible official, as designated by the manufacturer.

(c) The test request will specify the compressor category or configuration selected for testing, the batch selected for testing and the batch size, the manufacturer's plant or storage facility from which the compressors must be selected, and the time at which compressors must be selected. The test request will also provide for situations in which the selected configuration or category is unavailable for testing. The test request may include an alternative category or configuration selected for testing in the event that compressors of the first specified category or configuration are not available for testing because the compressors are not being manufactured at the specified plant and/or are not being manufactured during the specified time or not being stored at the specified plant or storage facility.

(d) Any manufacturer shall, upon receipt of the test request, select and test a batch sample of compressors from two consecutively produced batches of the compressor category or configurations specified in the test request in accordance with these regulations and the conditions specified in the test request.

(e) (1) Any testing conducted by the manufacturer pursuant to a test request shall be initiated within such period as is specified in the test request; Except, that such initiation may be delayed for increments of 24 hours or one business day where ambient test site weather conditions in any 24-hour period do not permit testing; *Provided*, That ambient test site weather conditions for that period are recorded.

(2) The manufacturer shall complete noise emission testing on a minimum of five compressors per day, unless otherwise provided for by the Administrator or unless ambient test site conditions only permit the testing of a lesser number; *Provided*, That ambient test site weather conditions for that period are recorded.

(3) The manufacturer will be allowed 24 hours to ship compressors from a batch sample from the assembly plant to the testing facility if the facility is not

located at the plant or in close proximity to the plant; Except, that the Administrator may approve more time based upon a request by the manufacturer accompanied by a satisfactory justification.

(f) The Administrator may issue an order to the manufacturer to cease to distribute into commerce compressors of a specified category or configuration being manufactured at a particular facility if:

(1) The manufacturer refuses to comply with the provisions of a test request issued by the Administrator pursuant to this section; or

(2) The manufacturer refuses to comply with any of the requirements of this section.

(g) A cease-to-distribute order shall not be issued under paragraph (f) of this section if such refusal is caused by conditions and circumstances outside the control of the manufacturer which render it impossible to comply with the provisions of a test request or any other requirements of this section. Such conditions and circumstances shall include, but are not limited to, any uncontrollable factors which result in the temporary unavailability of equipment and personnel needed to conduct the required tests, such as equipment breakdown or failure or illness of personnel, but shall not include failure of the manufacturer to adequately plan for and provide the equipment and personnel needed to conduct the tests. The manufacturer will bear the burden of establishing the presence of the conditions and circumstances required by this paragraph.

(h) Any such order shall be issued only after a notice and opportunity for a hearing.

§ 204.57-2 Test compressor sample selection.

(a) Compressors comprising the batch sample which are required to be tested pursuant to a test request in accordance with this subpart will be randomly selected from a batch of compressors of the category or configuration specified in the test request. The random selection will be achieved by sequentially numbering all of the compressors in the batch and then using a table of random numbers to select the number of compressors, as specified in paragraph (c) of this section, based on the batch size designated by the Administrator in the test request. An alternative selection plan may be used by a manufacturer; *Provided*, That such a plan is approved by the Administrator.

(b) The Acceptable Quality Level is 10 percent. The appropriate sampling plans associated with the designated AQL are contained in Appendix I, Table II.

(c) The appropriate batch sample size will be determined by reference to Appendix I, Tables I and II. A code letter is obtained from Table I based on the batch size designated by the Administrator in a test request. The batch sample size will be equal to the maximum cumulative sample size as listed in Table II for the appropriate code letter obtained from Table I plus an additional ten percent rounded off to the next highest number.

(d) Individual compressors comprising the test sample will be randomly selected from the batch sample using the same random selection plan as in paragraph (a) of this section. Test sample size will be determined by entering Table II.

(e) The test compressor of the category or configuration selected for testing shall have been assembled by the manufacturer for distribution in commerce using the manufacturers normal production process.

(f) Unless otherwise indicated in the test request, the manufacturer will select the batch sample from the production batch next scheduled after receipt of the test request of the category or configuration specified in the test request.

(g) Unless otherwise indicated in the test request, the manufacturer shall select the compressors designated in the test request for testing.

(h) At their discretion, EPA Enforcement Officers, rather than the manufacturer, may select the compressors designated in the test request.

(i) The manufacturer will keep on hand all compressors in the batch sample until such time as the batch is accepted or rejected in accordance with § 204.57-6; Except, that compressors actually tested and found to be in conformance with these regulations need not be kept.

§ 204.57-3 Test compressor preparation.

Prior to the official test, the test compressor selected in accordance with § 204.57-2 will be prepared in accordance with § 204.55-6.

§ 204.57-4 Testing.

(a) The manufacturer shall conduct one valid test in accordance with the test procedures specified in § 204.54 for each compressor selected for testing pursuant to this subpart.

(b) No maintenance will be performed on test compressors, except as provided for by § 204.57-3. In the event a compressor is unable to complete the emission test, the manufacturer may replace the compressor. Any replacement compressor will be a production compressor of the same configuration, and the replacement compressor will be randomly selected from the batch sample and will be subject to all the provisions of these regulations.

§ 204.57-5 Reporting of test results.

(a) (1) The manufacturer shall submit a copy of the test report for all testing conducted pursuant to § 204.57 at the conclusion of each twenty-four hour period during which testing is done.

(2) For each test conducted the manufacturer will provide the following information:

(i) Configuration and category identification, where applicable

(ii) Year, make, assembly date, and model of compressor

(iii) Compressor serial number

(iv) Test results by serial numbers

(3) The first test report for each batch sample will contain a listing of all serial numbers in that batch.

(b) In the case where an EPA Enforcement Officer is present during testing required by this subpart, the written reports requested in paragraph (a) of this section may be given directly to the Enforcement Officer.

(c) Within five days after completion of testing of all compressors in a batch sample, the manufacturer shall submit to the Administrator a final report which will include the information required by the test request in the format as stipulated, in addition to the following:

(1) The name, location, and description of the manufacturer's noise test facilities which meet the specifications of § 204.54 and were utilized to conduct testing reported pursuant to this section; Except, that a test facility that has been described in a previous submission under this subpart need not be described again but must be identified as such.

(2) A description of the random compressor selection method used, referencing any tables of random numbers that were used, and the name of the person in charge of the random number selection.

(3) The following information for each test conducted:

(i) The completed data sheet required by § 204.54 for all noise emission tests including, for each invalid test, the reason for invalidation.

(ii) A complete description of any modification, repair, preparation, maintenance, and/or testing which was performed on the test compressor and will not be performed on all other production compressors.

(iii) The reason for the replacement, where a replacement compressor was authorized by the Administrator, and, if any, the test results for replaced compressors.

(2) The following statement and endorsement:

This report is submitted pursuant to section 6 and section 13 of the Noise Control Act of 1972. All testing for which data is reported herein was conducted in strict conformance with applicable regulations under 40 CFR Part 204 *et seq.* All the data reported herein are a true and accurate representation of such testing. All other information reported herein is, to the best of (company) knowledge true and accurate. I am aware of the penalties associated with violations of the Noise Control Act of 1972 and the regulations thereunder.

(authorized representative)

§ 204.57-6 Acceptance and rejection of batches.

(a) A failing compressor is one whose measured sound level is in excess of the applicable noise emission standard.

(b) The batch from which a batch sample is selected will be accepted or rejected based upon the number of failing compressors in the batch sample. A sufficient number of test samples will be drawn from the batch sample until the cumulative number of failing compressors is less than or equal to the acceptance number or greater than or equal to the rejection number appropriate for the cumulative number of compressors tested. The acceptance and rejection

numbers listed in Appendix I, Table II at the appropriate code letter obtained according to § 204.57-2 will be used in determining whether the acceptance or rejection of a batch has occurred.

(c) Acceptance or rejection of a batch takes place when a decision is made on the last compressor required to make a decision under paragraph (b) of this section.

§ 204.57-7 Acceptance and rejection of batch sequence.

(a) The manufacturer will continue to inspect consecutive batches until the batch sequence is accepted or rejected. The batch sequence will be accepted or rejected based upon the number of rejected batches. A sufficient number of consecutive batches will be inspected until the cumulative number of rejected batches is less than or equal to the sequence acceptance number or greater than or equal to the sequence rejection number appropriate for the cumulative number of batches inspected. The acceptance and rejection numbers listed in Appendix I, Table III at the appropriate code letter obtained according to § 204.57-2 will be used in determining whether the acceptance or rejection of a batch sequence has occurred.

(b) Acceptance or rejection of a batch sequence takes place when the decision is made on the last compressor required to make a decision under paragraph (a) of this section.

(c) If the batch sequence is accepted, the manufacturer will not be required to perform any additional testing on compressors from subsequent batches pursuant to the initiating test request.

(d) The Administrator may terminate testing earlier than required in paragraph (b) of this section based on a request by the manufacturer accompanied by voluntary cessation of distribution in commerce, from all plants, of compressors from the configuration in question: *Provided*, That once production is reinitiated, the manufacturer must take the action described in § 204.57-9 (a) (1) and (a) (2) prior to distribution in commerce of any compressors from any plant of the compressor category or configuration in question.

§ 204.57-8 Continued testing.

(a) If a batch sequence is rejected in accordance with paragraph (b) of § 204.57-7, the Administrator may require continued 100 percent testing with respect to all compressors of that category or configuration produced at that plant.

(b) The Administrator will notify the manufacturer in writing of his intent to require any 100 percent testing of compressors pursuant to paragraph (a) of this section.

(c) Any tested compressor which demonstrates conformance with the applicable standards may be distributed into commerce.

(d) Any knowing distribution into commerce of a compressor which does not comply with the applicable standards is a prohibited act.

§ 204.57-9 Prohibition of distribution in commerce; manufacturer's remedy.

(a) Once 100 percent continuous testing has been instituted on a category or configuration pursuant to § 204.57-8, the manufacturer must take the following actions before the Administrator will consider discontinuing such testing:

(1) Submit a written report to the Administrator which identifies the reason for the noncompliance of the compressors, describes the problem, and describes the proposed quality control and/or quality assurance remedies to be taken by the manufacturer to correct the problem, or follows the requirements for an engineering change pursuant to § 204.55-9; and

(2) Demonstrate that the specified compressor category or configuration complies with the applicable emission standard by testing compressors from consecutively produced batches of that compressor category or configuration in accordance with these regulations and the conditions specified in the initial test request.

(b) Any compressor failing the prescribed noise emission tests conducted pursuant to this Subpart B may not be distributed in commerce until necessary adjustments or repairs have been made and the compressor passes a retest.

(c) No compressors of a rejected batch which are still in the hands of the manufacturer may be distributed in commerce unless the manufacturer has demonstrated to the satisfaction of the Administrator that such compressors do, in fact, conform to the regulations; Except, that any compressor that has been tested and does, in fact, conform with these regulations may be distributed in commerce.

§ 204.58 In-use requirements.

§ 204.58-1 Warranty.

(a) The portable air compressor manufacturer who is required to production verify under this part shall include, in the owner's manual or in other information supplied to the ultimate purchaser, the following statement:

NOISE EMISSIONS WARRANTY

The manufacturer warrants to the ultimate purchaser and each subsequent purchaser that this air compressor was designed, built, and equipped to conform at the time of sale to the first retail purchaser, with all applicable U.S. EPA. noise control regulations.

This warranty is not limited to any particular part, component, or system of the air compressor. Defects in the design, assembly, or in any part, component, or system of the compressor which, at the time of sale to the first retail purchaser, caused noise emissions to exceed Federal standards are covered by this warranty for the life of the air compressor.

(b) Not later than the date of submission of the production verification report required by § 204.55-4, the manufacturer shall submit to the Administrator two (2) copies of the written noise emission warranty required by paragraph (a) of

this section and two (2) copies of all other information provided to the ultimate purchaser which could reasonably be construed as impacting on the warranty.

(c) Not later than ten (10) days after dissemination, the manufacturer shall submit two (2) representative copies of all information of a general nature, or modifications thereto, which is provided to dealers, zone representatives, or other agents of the manufacturer regarding the administration and application of the noise emission warranty. Information regarding noise emission warranty claims which is provided to a dealer or representative in response to a particular warranty claim or dealer inquiry is not considered to be information of a general nature: *Provided*, That such information does not receive broad dissemination to dealers.

(d) All information required to be forwarded to the Administrator pursuant to this section shall be addressed to: Director, Mobile Source Enforcement Division (EN-340), U.S. Environmental Protection Agency, 401 M Street SW., Washington, D.C. 20460.

§ 204.58-2 Tampering.

(a) For each model year and for each configuration of air compressors covered by this part, the manufacturer shall submit to the Administrator a list of those acts which, in the manufacturer's estimation, might be done to the air compressor in use, on more than an occasional basis, and result in an increase in noise emissions above the standards prescribed in § 204.52. The manufacturer should indicate, wherever possible, the amount of this increase in noise level.

(b) The above information shall be submitted to the Administrator within adequate time prior to the introduction into commerce of each configuration to allow for the development and printing of tampering lists, as provided in paragraphs (c) and (d) of this section.

(c) On the basis of the above information, the Administrator will develop a list of acts which, in the Administrator's judgment, constitute the removal or rendering inoperative, other than for purposes of maintenance, repair, or replacement, of noise control devices or elements of design of the compressor. This list shall be provided to the manufacturer and may be updated from time to time. The list shall be included in the statement to the ultimate purchaser, as required by paragraph (d) (2) of this section. If the list is not provided by the Administrator within 30 days of the date on which the information required in paragraph (a) of this section is submitted, the manufacturer shall include only the statement in paragraph (d) (1) of this section, until such time as the list has been provided and the owner's manual is reprinted for other purposes.

(d) The manufacturer shall include in the owner's manual the following information:

(1) The statement:

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED

Federal law prohibits the following acts or the causing thereof:

(1) The removal or rendering inoperative by any persons, other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new compressor for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use; or

(2) the use of the compressor after such device or element of design has been removed or rendered inoperative by any person.

(2) The statement:

Among those acts included in the prohibition against tampering are the acts listed below.

Immediately following this statement, the manufacturer shall include the list developed by the Administrator under paragraph (c) of this section.

(e) Any act included in the list prepared pursuant to paragraph (c) of this section is presumed to constitute tampering; however, in any case in which a proscribed act has been committed and it can be shown that such act resulted in no increase in the sound level of the compressor or that the compressor still meets the noise emission standard of § 204.52, such act will not constitute tampering.

(f) The provisions of this section are not intended to preclude any State or local jurisdiction from adopting and enforcing its own prohibitions against the removal or rendering inoperative of noise control systems on compressors subject to this part.

(g) All information required by this section to be furnished to the Administrator shall be sent to the following address: Director, Mobile Source Enforcement Division (EN-340), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

§ 204.58-3 Instructions for maintenance, use, and repair.

(a) (1) The manufacturer shall provide to the ultimate purchaser of each portable air compressor covered by this part written instructions for the proper maintenance, use, and repair of the compressor in order to provide reasonable assurance of the elimination or minimization of noise emission degradation throughout the life of the compressor.

(2) The purpose of the instructions is to inform purchasers and mechanics of those acts necessary to reasonably assure that degradation of noise emission levels is eliminated or minimized during the life of the compressor. Manufacturers should prepare the instructions with this purpose in mind. The instructions should be clear and, to the extent practicable, written in non-technical language.

(3) The instructions must not be used to secure an unfair competitive advantage. They should not restrict replacement equipment to original equipment or service to dealer service. Manufacturers who so restrict replacement equipment must make public any performance specifications on such equipment.

(b) For the purpose of encouraging proper maintenance, the manufacturer shall provide a record or log book which shall contain a performance schedule for all required noise emission control maintenance. Space shall be provided in this record book so that the purchaser can note what maintenance was done, by whom, where and when.

(c) Not later than the date of submission of the production verification report required by § 204.55-4, the manufacturer shall submit to the Administrator two (2) copies of the maintenance instructions (including the record book) required by paragraphs (a) and (b) of this section.

(d) The Administrator will require modifications to the instructions if they are not both necessary and reasonable.

(e) Information required to be submitted to the Administrator pursuant to this section, shall be sent to the following address: Director, Mobile Source Enforcement Division (EN-340), U.S. Environmental Protection Agency, 401 M Street S.W., Washington, D.C. 20460.

§ 204.59 Recall of non-complying compressors.

(a) Pursuant to section 11(d)(1) of the Act, the Administrator may issue an order to the manufacturer to recall and repair or modify any compressor distributed in commerce not in compliance with this subpart.

(b) A recall order issued pursuant to this section shall be based upon a determination by the Administrator that compressors of a specified category or configuration have been distributed in commerce which do not conform to the regulations. Such determination may be based on:

(1) A technical analysis of the noise emission characteristics of the category or configuration in question; or

(2) Any other relevant information, including test data.

(c) For the purposes of this section, noise emissions may be measured by any test prescribed in § 204.54 for testing prior to sale or any other test which has been demonstrated to correlate with the prescribed test procedure.

(d) Any such order shall be issued only after notice and an opportunity for a hearing.

(e) All costs, including labor and parts, associated with the recall and repair or modification of non-complying compressors under this section shall be borne by the manufacturer.

(f) This section shall not limit the discretion of the Administrator to take any other actions which are authorized by the Act.

APPENDIX I

TABLE I—SAMPLE SIZE CODE LETTERS

Batch size:	Code letter
4 to 8.....	A
9 to 15.....	B
16 to 25.....	C
26 and larger.....	D

TABLE II.—Sampling plans for inspecting batches

Sample size code letter	Test sample	Test sample size	Cumulative test sample size	Batch inspection criteria	
				Acceptance number	Rejection number
A.....	1st.....	4	4	0	1
B.....	1st.....	3	3	0	1
C.....	1st.....	3	3	0	2
	2d.....	3	6	1	2
D.....	1st.....	2	2	(0)	2
	2d.....	2	4	(0)	2
	3d.....	2	6	0	2
	4th.....	2	8	0	3
	5th.....	2	10	1	3
	6th.....	2	12	1	3
	7th.....	2	14	2	3

¹ Batch acceptance not permitted at this sample size.

TABLE III.—Batch sequence plans

Sample size code letter	Number batches	Cumulative number batches	Sequence inspection criteria	
			Acceptance number	Rejection number
A.....	2	2	1	(1)
	2	4	2	(4)
	2	6	3	5
	2	8	4	5
B.....	2	2	0	(1)
	2	4	1	(4)
	2	6	2	5
	2	8	3	5
	2	10	4	6
	2	12	5	6
C.....	2	2	(0)	2
	2	4	0	2
	2	6	0	3
	2	8	1	3
	2	10	2	4
	2	12	3	4
D.....	2	2	0	2
	2	4	1	3
	2	6	2	4
	2	8	3	4

¹ Batch sequence rejection not permitted for this number of batches.

² Batch sequence acceptance not permitted for this number of batches.

TABLE IV.—Recommended format for portable air compressor noise data sheet

Test report number:.....

Subject:.....

Manufacturer:..... Model:..... Serial No.:.....

Rated speed:..... Rpm:..... Rated capacity:..... cfm (m³/min).

Configuration identification:..... Category identification:.....

Portable air compressor identification No.:..... Build Date:.....

Test conditions:

Manufacturers test site identification and location:.....

Reflecting plane composition:.....

Operating speed as tested:..... rpm.

Beginning of test..... rpm.

End of test..... rpm.

Air pressure supplied:..... psi (kg/cm²) Ambient wind speed..... mph (km/hr).

Actual flow rate:..... cfm (m³/min.) Atmospheric pressure..... psi (kg/cm²).

Temperature:..... °F (°C).

Instrumentation:

Microphone manufacturer:..... Model No.:..... Serial No.:.....

Sound Level Meter Manufacturer:..... Model No.:..... Serial No.:.....

Calibrator Manufacturer:..... Model No.:..... Serial No.:.....

Other and Manufacturer:..... Model No.:..... Serial No.:.....

Data:

Sound levels (decibels)	Background sound level at location 1 (decibels)	Location					Average sound level (decibels)
		1	2	3	4	5	
A-Weighted							
Tested by:							Date:
Reported by:							Date:
Supervisory personnel:							Title:
.....							Title:

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WEDNESDAY, JANUARY 14, 1976



PART III:

ENVIRONMENTAL PROTECTION AGENCY

■

RAILROAD NOISE EMISSION STANDARDS

Title 40—Protection of Environment
CHAPTER I—ENVIRONMENTAL
PROTECTION AGENCY

[FRL 469-3]

PART 201—RAILROAD NOISE
EMISSION STANDARDS

On July 3, 1974, notice was published in the *FEDERAL REGISTER* (39 FR 24580) that the Environmental Protection Agency (EPA or Agency) was proposing noise emission standards for surface carriers engaged in interstate commerce by railroad.

The purpose of this notice is to establish final noise emission standards for surface carriers engaged in interstate commerce by railroad by establishing a new Part 201 of Title 40 of the Code of Federal Regulations. This final rulemaking is promulgated pursuant to section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Pub. L. 92-574.

INTRODUCTION

In section 2 of the Noise Control Act, Congress expressed its judgment "that 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." Congress also declared within section 2 of the Act, "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." As a part of this essential Federal action, section 17 requires the Administrator to publish proposed noise emission regulations which "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." After the effective date of a regulation under section 17, applicable to noise emissions resulting from the operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad, no State or political subdivision thereof may adopt or enforce any standard applicable to noise emissions resulting from the operation of the same equipment or facility of such carrier unless such standard is identical to a standard applicable to noise emissions resulting from such operation prescribed by these regulations. The Administrator, after consultation with the Secretary of Transportation may, however, determine that the State or local standard, control, license, regulation, or restriction is necessitated by special local conditions and is not in conflict with regulations promulgated under section 17. Procedures for State and local governments to apply under section 17(c)(2) of the Act will be published by this Agency shortly after promulgation of this regulation.

These sections of the Noise Control Act reflect the desire of Congress to pro-

tect both the environment and commerce through the establishment of uniform national noise emission regulations for the operation of interstate railroad equipment and facilities which require national uniformity of treatment in order to facilitate interstate commerce. Such treatment is requisite for those types of interstate railroad equipment and facilities whose operation would be burdened by conflicting State and local noise controls. Preemption under section 17 occurs only for State or local noise regulations on equipment and facilities on which Federal regulations are in effect. Where national uniformity of treatment is not needed, Congress recognizes the primary responsibility of State and local governments to protect the environment from noise. State and local regulations on noise emissions resulting from the operation of equipment and facilities of surface carriers engaged in interstate commerce by railroad, which are not preempted by applicable Federal regulations under section 17, are subject to the Commerce Clause of the U.S. Constitution. Under that Clause, any State or local regulations which constitute an undue burden on interstate commerce cannot stand.

The Act directs that Federal regulations on interstate railroad equipment and facilities under section 17 are to include noise emission standards setting such limits on noise emissions resulting from their operation which reflect the degree of noise reduction achievable through the application of the best available technology, taking into account the cost of compliance. Based upon the strict language of the Noise Control Act, its legislative history, and other relevant data, these requirements are further clarified as follows:

"Best available technology" is that noise abatement technology 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. "Available technology" is further defined to include:

1. Technology which has been demonstrated and is currently known to be feasible.

2. Technology for which there will be a production capacity to produce the estimated number of parts required in reasonable time to allow for distribution and installation prior to the effective date of the regulation.

3. Technology that is compatible with all safety regulations and takes into account operational considerations including maintenance, and other pollution control equipment.

"Cost of compliance" is the cost of identifying what action must be taken to meet the specified noise emission level, the cost of taking that action, and any additional cost of operation and maintenance caused by that action.

In preparing this final regulation the Administrator has given full consideration to cost of compliance and available technology and has consulted with the Secretary of Transportation to assure ap-

propriate consideration for safety and for availability of technology.

Further, recognizing that the Noise Control Act was enacted to protect the public from adverse health and welfare effects due to noise, EPA has also considered the impact of railroad noise taking into account the levels of environmental noise requisite to protect the public health and welfare with an adequate margin of safety, as published by the EPA in March 1974 in accordance with section 5(a)(2) of the Act.

Accordingly, EPA has developed and is now implementing an interstate rail carrier noise control strategy based on section 17 of the Act that should prove to be effective in reducing environmental noise from railroads in many areas to the levels identified as protective of public health and welfare. The strategy calls for the reduction of the noise from railroad locomotives and rail cars to the lowest noise levels consistent with the noise abatement technology available, taking into account the cost of compliance.

Compliance regulations are to be developed and promulgated under separate rule making by the Department of Transportation as called for in section 17(b) of the Act.

The legal basis supporting promulgation of this regulation was set forth in substantial detail in the notice of proposed rulemaking published in the *FEDERAL REGISTER* on July 3, 1974 (39 FR 24580). In the same publication, notice was given of the availability of the "Background Document and Environmental Explanation for the Proposed Interstate Rail Carrier Noise Emission Regulations," which provided the factual basis for the standards proposed, measurement methodology applicable thereto, costs of compliance with the proposed standards and the public health and welfare benefits expected. Public comment was solicited, with the comment period extending from July 3, 1974, to August 17, 1974.

To ensure that all issues involved in the proposed regulation and Background Document were fully addressed prior to promulgation of the final regulation, a public consultation meeting was announced in the *FEDERAL REGISTER* of August 6, 1974 (39 FR 28316) and was subsequently held on August 14, 1974, in Des Plaines, Illinois. The principal issues reviewed at this meeting related to the adequacy of the available technology to meet requirements in the proposed standards and the impact of Federal preemption on State and local noise regulations. The transcript of the meeting has been included as a portion of the total body of public comment received.

Public comments received during the public comment period are maintained at the EPA Headquarters, 401 M Street, SW., Washington, D.C. 20460, and are available for public inspection during normal working hours.

In the future the Agency may propose further regulations concerning railroad noise, as the need for and feasibility of such are demonstrated. Such regulations may be proposed as amendments to that part of the Code of Federal Regulations

being established by this regulatory action, or may be proposed pursuant to the EPA's authority to set noise emission standards for new products specified in section 6 of the Act.

SUMMARY OF COMMENTS RECEIVED

While the EPA received and considered carefully a significant number of comments which were in agreement with the railroad noise regulation as proposed, other comments were received identifying matters which the Agency believes warrant further discussion.

(1) *The scope of railroad facilities and equipment regulated.* A significant number of comments brought into issue the general question of why the EPA decided, apart from considerations of available technology and cost of compliance, not to regulate all railroad facilities and equipment, and chose rather to regulate only certain equipment at this time.

This decision by the EPA was based on its view that the uniform Federal regulation of the noise produced by certain railroad facilities and equipment is not necessary at this time since such noise sources can best be controlled by measures which do not now require national uniformity of treatment in order to facilitate interstate commerce as specified in section 2(a)(3) of the Act.

The EPA has studied the operations of carriers engaged in interstate commerce by rail and recognizes that such operations are imbedded into every corner of the nation at thousands of locations and along hundreds of thousands of miles of right-of-way. The nature and magnitude of the noises produced by the many types of facilities and equipment utilized in these operations differ greatly and their impact on the environment varies widely depending on whether they occur, for example, in a desert or adjacent to a residential area. The Agency concludes that the control of certain of these noise sources, such as fixed facilities, or equipment used infrequently or primarily in one location, is best handled by the State and local authorities, rather than the Federal government, since the State and local authorities are believed in this case to be better able than the Federal government to consider local circumstances in applying such measures as the addition of noise barriers or sound insulation to particular facilities, or the positioning of noisy equipment within these facilities as far as possible from noise-sensitive areas. Further, and more importantly, the EPA did not find during its analysis, and has not received from rail carriers, any information identifying situations where lack of uniform State and local laws with respect to these facilities and equipment has imposed any significant burden on interstate commerce.

In view therefore of the absence of evidence calling for the national regulation of all interstate rail carrier facilities and equipment in order to facilitate interstate commerce, the EPA believes that its limited regulatory action, as proposed in the notice of proposed rulemaking, to consider interstate rail operations, facilities, and equipment on an individual

basis in determining the need for their uniform Federal regulation is appropriate.

a. *Horns, bells, whistles, and other warning devices.* A number of commenters, ranging from private citizens to both State and Federal administrative agencies, expressed both concern over and agreement with the EPA's decision not to regulate rail carrier acoustic warning devices.

This broad response serves as an indication of the conspicuous nature of the noises produced by such warning devices, and that to many citizens they are one of the most noticeable and disagreeable examples of State noise.

Three State environmental agencies indicated that complaints from citizens about railroad warning device noise were not only large in number but comprised the major source of all complaints about railroad noise, and therefore contended that such warning devices should be regulated.

The Agency in analyzing the problem of acoustic warning device noise recognized a unique characteristic of such noise as opposed to other railroad noises. That is, it is a form of noise that is purposefully created and intended to be heard for safety reasons, instead of being an unwanted by-product of some other activity. As such, the EPA found that these warning devices and their use are regulated at both Federal and State levels; information as to the number and nature of such regulations are included in the Background Document. In addition, studies considered by the EPA, also included in the Background Document, show that such warning devices do not appear to be unrelated to highway and pedestrian safety, especially in emergency situations. The reduction or elimination of such warning devices through the authorities of the Noise Control Act does not therefore appear to be a reasonable consideration, as suggested by three commenters.

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. Any comprehensive Federal regulation in this area could be overly diverse and cumbersome. The EPA encourages in this regard the interaction between local and State governments and the railroads directly concerned in solving the particular local noise problems associated with the use of such warning devices. Such interaction has taken place, examples of which are included in the Background Document, and has apparently produced both safe and cost effective solutions to these local noise problems. However, if local authorities, after having first sought solutions with the railroads involved, have still not been able to resolve their problems, they are encouraged to then

direct their concerns to the EPA for possible further Federal action.

Two other State environmental agencies indicated that locomotive horns, bells, or whistles around railroad yards are unnecessarily overused by the railroads, and that such use should be limited by Federal regulation.

The EPA has determined that the use of such warning devices in and around railroad yards is not entirely out of place due to the often heavy intermingling of workers and mobile equipment with locomotives and rail cars. Such use may of course be beyond the extent necessary to ensure safety, not only in railroad yards but wherever else railroad horns, bells, and whistles are used. The term "over-used," however, is relative to the particular circumstances surrounding such use: Whether, for example, a railroad yard or rail-highway intersection is situated in a residential area as opposed to an industrialized area. These situations are instances where the EPA's recommendation for railroad and community interaction is at this time the most appropriate means of achieving effective warning device noise abatement.

Another commenter stated that railroad acoustic warning signals are ineffective due to the often loud ambient noise levels that exist in motor vehicle interiors due to radios and other noise sources.

Acoustical analysis available to the Agency indicates that the effectiveness of acoustic warning signals as used on police and emergency vehicles as well as urban buses and trucks is not only a function of amplitude or loudness but also of tonal characteristics. That is, recognition is achieved by a particular fixed or variable frequency of a reasonable loudness that impinges itself upon whatever ambient noise may exist. This view is in accord with the study referenced above which indicates that railroad warning signals do appear to affect safety, especially in emergency situations.

One commenter indicated that roadway drop gates equipped with flasher units provide visual warning that is adequate without acoustic signals.

EPA encourages alternate solutions to the routine use of acoustic warning devices at rail and road crossings. For example, the elimination of public grade level railroad crossings would do away with the source of the problem, the intersection of rail tracks and public thoroughfares. However, such a program on a national basis of elevating or depressing either the railroad line or the public thoroughfare at each crossing, solely for the purpose of the abatement of acoustic warning signal noise, is not considered appropriate. However, it should be seriously considered in future public thoroughfare or railroad line construction programs for both safety and environmental noise reasons.

Warning gates, too, as suggested, would appear to be an effective safety alternative to acoustic warning signals. Specifying their use on a national basis, however, would be prohibitively expensive considering that costs range from

\$45,000 to \$90,000 per unit, and with the extensive use of grade level crossings in the United States, for example Illinois having approximately 15,000 crossings without drop gates, the cost would be \$675 million or more in that State alone.

Since acoustic warning devices do serve the interests of safety and, in the Agency's opinion, can best be regulated at the local and State level for the reasons indicated, EPA does not propose to regulate railroad acoustic warning devices at this time.

b. *Repair and maintenance shops, terminals, marshalling yards, humping yards, and specifically, rail car retarders.* Some commenters voiced objection to the exclusion of noise emission standards for fixed facility and area-type sources from the regulation, while others were explicit in their agreement not to include such standards.

A major national railroad association commented that the EPA should prescribe noise standards for area-type sources such as yards and terminals.

The facilities and equipment found within railroad yard and terminal areas, with the exception of locomotives, rail cars, and some mobile special purpose equipment, are permanent installations which are normally subject to the environmental noise regulations of only one jurisdiction.

The Agency has determined that such fixed facility railroad yard and terminal noise is best controlled at this time at the local level, employing measures which do not in themselves affect the movement of trains and therefore do not require national uniformity of treatment.

Local jurisdictions are familiar with the particular complexities of their community/railroad yard noise situation, and as such, are in a position to exhibit greater sensitivity in prescribing practical and cost effective solutions to the local noise problem. Indeed, the same railroad association which has encouraged the establishment of Federal area noise standards for yards and terminals, specifically pointed out in its remarks that such facilities do vary in size, shape, and special characteristics, and that the noises produced there are diverse. The EPA recognizes that the communities which neighbor these yards and terminals are equally diverse, varying in land zoning and population density and distribution. As such, Federal regulation which successfully produces substantial population health and welfare benefit at one locality may produce little or no such benefit at another locality. For example, the regulation of a railroad yard facility which is enveloped by a residential community would not achieve similar population health and welfare benefit when equally applied to a similar railroad yard facility which exists within a large industrial park complex. This observed differential is directly attributable to the different land zoning and population density and distribution characteristics of the two communities.

Acknowledging both the single jurisdictional nature and the diversity which characterize railroad yards and termi-

nals and their neighboring communities, and citing the virtual absence of evidence that non-uniform State and local regulation of railroad yard and terminal facilities in fact substantially burdens interstate commerce, the Agency at this time does not propose to establish standards for the regulation of railroad yard and terminal fixed facility noise.

Two commenters requested that the EPA impose property line standards on railroad noise using an L_{10} noise level standard.

The use of property line noise standards is applicable primarily to the regulation of noise from fixed facility and area noise sources. In the regulation of railroad noise such sources include maintenance shops, marshalling yards, humping yards, and terminals. Since EPA has not covered these facilities in the regulation, the use of such area noise level standards in the regulation is not appropriate.

The Department of Transportation commented that the EPA should regulate retarder noise emissions. They indicated that active retarders should be regulated by October 1976 since established barrier technology makes it possible to meet that schedule. They further state that a plan to convert to retractable inert retarders should be implemented by 1979.

The EPA recognizes that rail car retarding operations may produce individual peak noise levels of up to 120 dB(A) at 100 feet, and may be a problem noise source to the surrounding community. However, as with other fixed facilities, retarders are subject to the authority of only one jurisdiction, and as such can best be regulated at the local level by means which do not in themselves affect the movement of trains and therefore do not require national uniformity of treatment.

The Agency's study of railroad yard noise (inclusive of retarder noise) indicates that concern for noise from railroad yards is apparently limited to certain localities and is not a national concern. This is due in large part to the location of a number of yards in non-urban areas and the relatively few existing retarder systems, approximately 120 today. This local nature of the retarder noise problem further reduces the desirability of a Federally preemptive regulation. DOT's comment in support of a Federally preemptive retarder noise regulation which would utilize barrier technology does not consider the local characteristics of each community which is impacted by retarder noise. For example, in a situation where a retarder yard is bordered on one side by a residential area and on all other sides by an unpopulated wooded area, a barrier could be beneficial to public health and welfare only if erected on that side of the retarder which faces the residential area. Under such circumstances a community would receive insufficient health and welfare benefits to justify the costs incurred by a Federally preemptive regulation which mandates the installation of barrier walls on both sides of retarder mechanisms. At the currently estimated

materials cost of \$70 to \$100 per linear foot for barriers, barrier costs would run from \$75 thousand to \$150 thousand per railroad yard and from \$9.6 to \$19.1 million for the entire railroad industry. Maintenance and replacement costs, yard down time, and track modification costs have not been fully identified. Expenditures should be assured of producing maximum benefits, and this may best be done through local regulation. Available space for installation of barriers, and safety hazards which might accrue thereto, have not been identified, and are peculiar to the particular characteristics of the individual railroad yards, and as such may be best accounted for through local regulation.

A Federal regulation for conversion of inert retarders to retractable inert retarders would be subject to considerations similar to those discussed for the erection of barriers around active retarders, except that probable yard downtime and installation and materials costs would be considerably greater for conversion to inert retractable retarders than for the erection of barriers. The EPA estimates that conversion to retractable inert retarders would cost \$7.5 thousand for each retarder, not including labor, yard down time, or maintenance costs. Applying a gross estimate of 20 thousand such inert retarders nationally, estimated national conversion costs, exclusive of labor, down time, and operational costs, would be \$150 million.

Although the EPA does not currently propose to regulate retarder noise, it does recommend that local jurisdictions establish regulations which require railroads to utilize barrier technology where needed, and where both practical and feasible. Further consideration may be given by the EPA to possibly providing future regulations to require that new retarder installations be equipped with retractable inert retarders, computer control systems, retarder beam lubrication systems, or other available technical developments which result in significant noise reduction from retarders as the need for such regulations is demonstrated relative to the costs involved and the availability of technology.

DOT also commented that the EPA should promulgate a regulation which protects railroad workmen as well as the community from retarder noise.

For reasons outlined above, the EPA does not presently propose to regulate retarder noise from either the community health and welfare or the occupational health and safety point of view. The latter consideration is specifically under the purview of the Occupational Safety and Health Administration (OSHA) and is properly addressed by that Agency.

Currently, the Federal Railroad Administration (FRA) is proposing a regulation which would limit noise levels within railroad workmen's sleeping quarters. This proposal is in response to a petition from the Congress of Railway Unions (CRU) that the FRA institute rule making procedures to prohibit railroads from having or providing employee sleeping quarters less than one mile from

its property or yards where switching or humping operations are performed. The FRA's proposed regulation does not regulate the distance of sleeping quarters from the railroad yard; however, it does specify acceptable interior noise levels for sleeping quarters.

c. Special purpose equipment. A major national railroad association commented that the EPA should promptly establish noise limits applicable to the noise from special purpose equipment.

Examples of special purpose equipment which may be located on or operated from rail cars include: Ballast cribbing machines, ballast regulators, conditioners and scarifiers, bolt machines, brush cutters, compactors, concrete mixers, cranes and derricks, earth boring machines, electric welding machines, grinders, grouters, pile drivers, rail heaters, rail layers, sandblasters, snow plows, spike drivers, sprayers and other numerous types of maintenance-of-way equipment.

The Agency realizes that special purpose equipment such as that used for maintenance-of-way activities is essentially construction equipment, and as such may emit loud intermittent noise. Railroads may avoid noise problems by keeping routine maintenance activities to reasonable times, and local jurisdictions may easily regulate operation times for such equipment as long as exceptions are allowed for emergency use. For example, a community may wish to regulate the hours allowed for routine operation of spike driving equipment, but exception must be made for the operation of such equipment in the aftermath of a derailment, so that interstate commerce would not be unduly impeded.

The small numbers of such equipment, their infrequency of use, and the relative ease with which viable local regulations may be instituted, all tend to make a Federally preemptive regulation overly expensive relative to the benefits received.

Comments received by the Agency did not indicate that any cases currently exist where nonuniform local or state regulation of special purpose equipment has unduly burdened those railroads so regulated, and at this time the Agency does not believe that special purpose equipment requires national uniformity of treatment. However, the rail cars themselves on which such special purpose equipment is located are included under the standards for rail car operations. The Agency continues to solicit notice of specific cases where nonuniform local or state regulation of special purpose equipment has created a burden on interstate commerce. If in the future it appears that national uniformity of treatment of such equipment is appropriate, noise emission standards may be proposed.

d. Track and right of way. Three commenters raised questions dealing with the absence of track and right-of-way standards in the proposed regulation. Two stated that in view of the fact that the EPA had preempted State and local authorities from regulating track and right-of-way in the notice of proposed

rulemaking, it was in conflict with its mandate to issue noise emission standards reflecting "best available technology" since the regulation itself did not contain any track standard. The other was concerned that since a track standard was not included in the regulation, quiet rail cars might be penalized for wheel/rail noise caused by faulty track.

The EPA fully recognizes the need for track and right-of-way standards in any regulatory strategy that attempts to quiet the movement of rail cars.

The standard promulgated for rail cars applies to the total noise produced by the operation of trains on track. As such it is preemptive with respect to both rail cars and track. It reflects the noise level achievable by application of best maintenance practices to rail cars. Further reductions in noise levels are achievable through various track repairs and modifications. However, the EPA has not fully identified the available technology or the applicable costs associated with such practices. In the future, the EPA may propose standards which would require their application.

e. Rail cars equipped with auxiliary power equipment and mass transit systems.

Three commenters recommended that the regulation be revised so as to include noise standards for rail cars equipped with auxiliary power units, more specifically, mechanically refrigerated freight cars, and various auxiliary powered passenger-related cars.

The initial decision by the Agency was to regulate noise from all sources produced by rail cars while in motion only, and to leave to State and local authorities the regulation of whatever noise is produced from rail cars while stationary. This decision was made because these noises are a problem only when such cars are parked near noise-sensitive areas (such noises being indistinguishable from other railroad car noises while the cars are in motion), and because it was felt that such localized problems could best be controlled by measures such as the relocation of such cars to less noise-sensitive areas.

The Agency was and continues to be cognizant of the extent of the problem that can be caused in specific instances by the continuous operation of the diesel or gasoline engines which operate on such cars. Noise levels as high as 75 dB(A) at 15 meters (50 feet) are possible from refrigerator cars parked with their cooling systems running in marshalling yards and humping yards. Noise levels from such refrigerator cars can be even greater due to the fact that such cars are often parked coupled together in large numbers. Additional data acquired by and supplied to the Agency has shown that the problem exists not only with refrigerator cars but also with various passenger-related cars such as dining cars, lounge cars, cafe-type cars, and others equipped with self-contained power units; and that the abatement of such noise appears able to be and in certain instances is now being accomplished through the use of existing muffler

designs. In this regard, the statements on pages 4-28 and 4-37 of the original Background Document have been corrected to reflect the use (although of undetermined adequacy) of mufflers on the auxiliary engines used in refrigerator cars.

The Agency therefore may consider the possible promulgation of a regulation dealing with the noise produced by mechanically refrigerated freight cars and passenger cars equipped with auxiliary power equipment so as to reduce the impact of such noise when these cars are parked near noise sensitive areas.

Considerations as to the costs to be incurred by the owners of such rail cars as may be affected by any future regulatory action would be fully and adequately addressed during the course of the regulatory process that would be conducted relative to such regulation.

It should be noted that in the regulation being promulgated herein the standard for rail car operations refers to the total noise generated, and that the setting of emission standards on any element of that noise is preempted, whether the rail car is in motion or stationary. This Federal regulatory action does not, however, interfere with the ability of State and local governments to enact or enforce noise emission regulations on railroad yards that require railroads to erect noise barriers. Nor does this regulation interfere with the ability of State and local governments to enact or enforce noise emission regulations which require the relocation of parked rail cars that generate noise so long as such regulation is reviewed and approved by EPA pursuant to section 17(c)(2) of the Act.

One of the commenters asked for an extension of the period of time prior to promulgation of the final regulation so that refrigerator car noise emissions could be studied in relation to wheel/rail noise.

Studies and data considered by the EPA show that such noise can range from 72 dB(A) (Thermo King Corporation, a major manufacturer of refrigeration equipment, 1975) to 75 dB(A) (Wyle Laboratories, an acoustical consulting firm, 1973), and that it is indistinguishable from overall train noise while the train is moving. As such, and in the absence of a showing that the existing data is questionable, no extension has been granted.

One commenter suggested that the regulation be made applicable to the operation of and equipment used by intra-urban mass transit systems.

The Agency has not intended and does not intend that intraurban mass transit systems be covered by the regulation being promulgated herein. It is the Agency's judgment that such systems are specifically excluded from regulation under section 17 of the Noise Control Act of 1972 by the definition of "carrier" cited in the Act which excludes "... street, suburban, and interurban electric railways unless operated as a part of a general railroad system of transportation." In addition such systems operate principally within one jurisdiction or in some cases throughout a small number

of contiguous metropolitan jurisdictions under the purview of a single transit authority, and as such do not appear to require uniform Federal regulation in order to facilitate interstate commerce. However, the exclusion of such systems does not also exclude the operations and equipment associated with commuter rail services provided by a number of interstate rail carriers.

(2) *Standards for locomotive operation under stationary conditions.* A major locomotive manufacturer and a major national railroad association commented that the application of muffler technology alone would not be adequate to bring existing diesel-electric locomotives into compliance with the 67 dB(A) idle standard to be effective 4 years from the date of promulgation of the regulation. Because this regulation as proposed has been revised and does not now call for the modification of in-use locomotives, this becomes a question of new locomotive design.

Available data indicate that although locomotive exhaust noise is often the dominant noise source at idle, structurally radiated noise may in some cases be dominant.

A major locomotive manufacturer presented the Agency with data which indicate that for certain idling locomotives, including models equipped with turbocharged and Rootes blown engines, the octave bands representing the overall A-weighted locomotive sound levels at 100 feet are not totally dominated by exhaust noise, but are somewhat controlled by structurally radiated noise. These data further indicate that particular locomotives may emit overall locomotive idle noise levels of approximately 69 dB(A) at 100 feet. EPA data further indicate that some locomotives may emit idle noise levels in excess of 69 dB(A) which are also dominated by structurally radiated noise. Locomotives with such high levels of structurally radiated noise cannot be brought into compliance with the proposed level of 67 dB(A) through, for example, muffler application alone. Accordingly, the Agency has amended the locomotive idle noise standard, increasing the allowable noise emission level from 67 dB(A) to 70 dB(A) at 100 feet.

A major rail passenger corporation commented that diesel electric locomotives equipped with auxiliary power generators or twin traction engines, and gas turbine locomotives, may not be able to meet the idle standard, and that special standards should be promulgated for such equipment.

In proposing this regulation the Agency intended to provide Federal preemption for all locomotive noise sources excepting acoustical warning devices, thus providing national uniformity of treatment to protect these mobile noise sources. Accordingly, State and local regulation of noise emissions from such locomotives equipped with auxiliary generators used to power electrical units on passenger cars, including the noise from such auxiliary generators per se, should be Federally preempted.

On this basis, the Agency has determined that Federally preemptive regulation of noise from auxiliary power units is appropriate. However, the noise from such sources was not specifically addressed by the Agency during rule making, and the standard as proposed considered only idle setting noise emissions from the primary propulsion engines of the stationary locomotives.

Because passenger locomotives do spend considerable time in a stationary disposition with auxiliary power units operating at the same time that the primary diesel engines are idling, the Agency foresees circumstances where the auxiliary unit noise may dominate other noise emissions from the idling locomotive, and thus be appropriate for regulatory action. After further consideration of this matter the Agency may address noise standards for such auxiliary units in a separate rule making. However, because the intent of the Act was to provide national uniformity of treatment where non-uniform State and local ordinances could likely impose a burden on interstate commerce, and because the locomotive as a whole is subject to this regulation, the Agency believes that its regulatory action relative to locomotive noise emissions is also preemptive with respect to State and local ordinances relative to noise emissions from the auxiliary power units which are an integral part of many such locomotives.

The Agency has received no data which would demonstrate that twin diesel electric locomotives are in fact incapable of compliance with the idle standard. Since the Agency has no data which would demonstrate that twin diesel engines are inherently louder than larger single diesel engines, and since twin-engined locomotives utilize the same basic diesel-electric technology as the more common single engined locomotives, separate standards for twin-engined diesel-electric locomotives are not included in this regulation. The standards as promulgated are therefore applicable to these locomotives.

While the Agency has sufficient data to confidently assess the ability of gas turbine-powered locomotives to meet the moving condition standard, the Agency has not been able to acquire sufficient data on the idle setting or stationary runup noise levels of gas turbine locomotives. Due to the virtual unavailability of such stationary noise data, the regulation as proposed has been revised, and the idle setting and stationary runup noise standards are no longer applicable to gas turbine locomotives. However, this regulation is preemptive with respect to State and local regulation of all turbine locomotive noise excepting that from acoustical warning devices, including regulation when such locomotives are stationary at idle. After the Agency has compiled a sufficient data base, idle setting and stationary runup noise standards for gas turbine locomotives may be established as a revision to these regulations.

Considerable comment was received concerning the full throttle stationary

standard. DOT questioned the acoustical acceptability of the typical load cell test sites and the validity of self loading due to the unaccounted for influence of noise emissions from the dynamic brake grid fans. Also cited was the possible obstruction of routine railroad operations due to local enforcement of the stationary standards.

DOT indicated that areas near railroad load cells are not far enough from reflective surfaces to be effective test sites. They also indicated that if load cells are to be used for enforcement the EPA should prescribe correction factors to account for the acoustical variability of actual load cell test sites.

In answering the above claim that load cells are unsuitable for locomotive noise measurement because they are situated too close to reflective areas, the EPA cites the fact that a number of load cells are portable and are readily available on a rental basis. These portable load cells may be transported to an acoustically acceptable site for locomotive noise testing. At such sites, accurate and meaningful noise measurements may be obtained without the use of site correction factors.

Additional DOT response indicated that the self-loading test is not valid because the cooling fans on the dynamic brake grids operate during self-loading, while in actual operations grid fans are never operated. They stated that the inherently high level of noise attributable to cooling fan operation (both engine and dynamic brake grid fans) during self load would interfere with the accurate and meaningful measurement of exhaust noise.

The EPA has considered the above comment and believes that objections to the self loading test are valid. Therefore, considering the difficulties involved in obtaining accurate measurements due to the interference of dynamic brake grid fan noise, and citing the availability of portable rented load cells, the Agency has decided to delete the self loading test as a recommended stationary testing procedure, while simultaneously endorsing the use of portable load cells, when necessary.

DOT indicated concern that enforcement of stationary standards could result in significant obstruction of routine railroad operation and hence interfere with the flow of interstate commerce. That is, any enforcement official could order any one or any number of locomotives to be moved to a load cell or self load area for testing, regardless of the maintenance work schedule at the load cell or the need for the subject locomotives to be engaged in interstate commerce.

Such potential difficulties have been considered by EPA, and the Agency believes that their effects may be minimized through proper structuring of the DOT compliance regulations which may specify responsible enforcement procedures.

(3) *Standards for locomotive operation under moving conditions.* The DOT favors a moving locomotive standard as a substitute for a stationary standard,

but stated that EPA's definition of way-side surface conditions should be improved.

The EPA strongly believes that a stationary as well as a moving locomotive standard is necessary in order to account for the varying nature of locomotive noise. Utilization of both stationary and moving standards also facilitates adequate and accurate enforcement. The additional measurement criteria which are being incorporated by the EPA as part of the final regulation specify way-side surface conditions in greater detail.

A major railway passenger corporation indicated that the moving locomotive standard should be speed related as is the case with the rail car standard. They further stated that gear noise, traction motor noise, and noise from locomotive appurtenances are speed related.

EPA data indicates that while diesel-electric locomotive noise does not appear to be speed related, electric freight, electric high speed passenger, and turbine high speed passenger noise levels do exhibit some speed-related correlations. However, the high speed noise emission levels exhibited by these locomotives appear to fall within the EPA's 90 dB(A) standard, and should pose no special compliance problem.

(4) *Standards for rail car operations.* DOT indicated that it is appropriate to limit any car regulation to at least two degree or wider turns as with the locomotive standard.

The EPA concurs with that statement and has made the appropriate changes in the Rail Car Standard.

One private car owner was concerned that the EPA Rail Car Noise Standards would require greater maintenance than that prescribed by the FRA (1974) Railroad Freight Car Safety Standards already in effect.

The EPA Rail Car Noise Emission Standards are based on those noise levels achievable through best maintenance practice. As such, the data used to determine the noise level standards was obtained from noise measurements of typical rail cars which were subject to maintenance requirements no more restrictive than those currently prescribed by the FRA Railroad Freight Car Safety Standards.

Since the data which were used to determine the Rail Car Noise Emission Standards were based on current maintenance requirements, compliance with the noise regulations is not anticipated to cause any additional maintenance burden.

A private car owner stated that the Federal standards on rail car noise should not apply to privately owned cars because private owners do not have the ability to service cars engaged in interstate commerce.

The Agency replies that while ultimate responsibility and liability for rail car maintenance lies with rail car owners, immediate responsibility and liability is assumed by the rail carrier who is moving the car in interstate commerce, and who does possess the ability to service rail cars.

(5) *Best maintenance practice locomotive standards.* DOT stated that the 365 day standards provide a disincentive to rebuild old locomotives into compliance or to specify new locomotives be delivered with the mufflers needed to achieve compliance.

Since the Agency has elected to delete the retrofit requirement due to disparities in current cost and technological data, only the second part of the above comment requires consideration. The Agency intends the 365 day standard to be a "best maintenance practice" standard which precludes further deterioration of locomotive noise levels, while allowing adequate time for application of the available technology prior to the effective date of the more restrictive newly manufactured locomotive standards.

(6) *Retrofit standards for in-use locomotives.* A major railroad association and a major locomotive manufacturer both indicated their support of newly manufactured locomotive regulations, and one exhaust equipment manufacturer stated that the technical and production capabilities do exist for new locomotive muffler applications. Having received no appreciable comment in opposition to the regulation of newly manufactured locomotives, the Agency is promulgating best technology noise emission standards applicable to locomotives which are manufactured after December 31, 1979.

However, there were no such concurrences regarding the regulation of noise emissions from existing locomotives, a proposal most widely known as "retrofit" because it largely involves the phased addition of mufflers to the existing locomotive fleet. Several docket entries contained economic and technological data which conflict significantly with the EPA data which appears in the Background Document. The principal areas of conflict involve disparities in determination of the "best available technology" as it exists today and the resultant costs of its application. There exists a further complicating factor in that the available space configurations existing within many locomotives have been altered over the years due to the addition and modification of various locomotive components such as dynamic braking systems and spark arresters. As a result of this practice there exist today numerous and diverse locomotive configurations, each possessing its own specific peculiarities which must be accounted for in a retrofit program. The implications of this diversity of locomotive configurations and the accompanying disagreement concerning available technology and the cost of its application (i.e., labor rates, capital costs of new facilities, etc.) have given rise to cost of compliance figures which range from the EPA's original estimates of \$80 to \$100 million to industry estimates approximating \$400 to \$800 million. Although the generation of additional information concerning the availability of technology may allow the Agency to

reconcile these widely varying retrofit cost estimates, the collection of such data would be a costly and time consuming process which may produce a retrofit cost estimate which remains substantially high relative to the public health and welfare benefits which would result, especially in view of the fact that railroad noise has not been identified as one of the major sources of noise in the environment. For these reasons the Agency has decided to remove the retrofit requirement from the regulation being promulgated herein. Acknowledging the uncertainties which currently accompany the retrofit provision, the Agency may reconsider the retrofit issue and may promulgate a retrofit requirement should further information indicate that the technology is available and that retrofit compliance costs are reasonable, relative to the health and welfare benefits to be accrued.

(7) *Cost and technology of locomotive noise reduction.* A major national railroad association and two other commenters indicated concern for the impact of the railroad noise regulation on the bankrupt and marginal railroads.

The Agency has endeavored to anticipate and account for all costs which the bankrupt railroads specifically, and all railroads generally, may incur as the result of this regulatory action. Best and worst case estimates for the sum of equivalent annual manufacturing costs and equivalent annual fuel costs over 25 years, vary from \$4.59 million to \$4.76 million for the entire railroad industry. The fractional impact of these costs on the marginal and bankrupt railroads is expected to be approximately 28 percent of the total cost to the entire railroad industry, with such costs not seen as being significant in comparison to other costs regularly incurred by such railroads.

Several commenters claimed that the introduction of mufflers to locomotives will cause numerous technical and environmental problems.

A major national railroad association and several other commenters warned that the use of mufflers, especially in combination with spark arresters, will cause increased backpressure, which will result in increased fuel consumption and increased atmospheric pollution.

Mufflers can be designed which are well within the manufacturer's warranty backpressure specifications for both Rootes blown and turbo-charged locomotives, for use both with or without spark arresters. Mufflers which are within these specifications should cause only insignificant increases in atmospheric pollutant emissions and a minimal increase in fuel consumption.

A major national railroad association indicated that carbon collection in the mufflers presents a potential fire hazard. Presently, there is no substantial indication that carbon collection in locomotive mufflers would present a potential fire hazard. Within spark arresters which are currently found on today's locomotives, carbon particles are gathered from

the exhaust gases prior to the passage of those gases through the outlet section of the spark arrester for discharge through the exhaust pipes. While it could be postulated that hot carbon might conceivably collect within mufflers which are in tandem with or are integrated into spark arresters, it could also be postulated that such carbon collection might just as readily occur at the outlets of spark arresters or within exhaust pipes which are presently found on locomotives. However, no such fire hazard due to carbon collection has been evidenced at spark arrester outlets or in exhaust pipes, and the Agency sees no indication that the installation of mufflers will substantially increase the potential for such a fire hazard.

A major railroad association indicated concern that increased railroad rates to cover compliance costs may cause diversion of traffic to more fuel intensive modes which also emit more atmospheric pollutants.

As stated previously, the cost impact of a regulation on newly manufactured locomotives should be, in itself, insufficient to necessitate the need for any major railroad rate increases. Thus, there does not appear to be any likelihood of diverting railroad traffic to more fuel and pollution intensive transport modes.

One commenter indicated that the application of mufflers will result in decreased reliability of the locomotives both with respect to failure of the mufflers themselves and to other components of the locomotives.

Mufflers could be made out of anti-corrosive, heat-resistant alloys for a long service life. Also an important consideration is the fact that the muffler would be within the carbody of the locomotive and would not be exposed to the elements, thus extending its expected useful life. Industrial mufflers have been designed for a useful life of over 20 years and it is expected that locomotive mufflers may be designed for a similarly long life span. Also, the design and utilization of mufflers which are within manufacturers' backpressure specifications, should preclude major adverse effects to other internal locomotive components.

(8) *Health and welfare impact.* Several commenters indicated that the EPA did not provide adequate information as to the number of people impacted by railroad noise, nor the number to be benefited by the regulation, or whether in fact such people were adversely affected from a health and welfare standpoint initially.

The Agency included in the Background Document studies and data which indicated that the number of people exposed to various noise levels by railroad traffic are significant. Such numbers are approximately 2.29 million people at or above an Ldn value of 55 dB(A). Exposure to such noise levels for extended periods of time has been determined to have an adverse effect on the health and welfare of those exposed, as indicated in an EPA report of March

1974 entitled "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety." In addition the EPA is establishing this regulation as part of a regulatory strategy that, according to Agency analysis, could eventually relieve approximately 520,000 people from railroad noise levels in excess of 55 dB(A), Ldn.

Four commenters contended that the health and welfare of people is not affected by railroad equipment which operates in sparsely populated or rural areas and that, therefore, the regulation of such equipment is not called for.

The Agency has determined that there is substantial mobility of the use of railroad equipment not only within particular railroad operating regions but across the nation as a whole, and that such mobility is an important facet of the manner in which railroad companies operate. This mobility is evidenced by the fact that rail cars and locomotives are transferred from one area to another in order to satisfy the fluctuations in required hauling capacity which take place, and by the practice whereby old line locomotives are retired by transferring them to railroad yards to act as switchers. It has been found that such mobility is increasing as evidenced by Railbox, a plan utilized by a growing number of railroads whereby rail cars are pooled so that their use may be shared anywhere within the operating regions of the participating railroads.

The Agency has determined, therefore, that the mobility of rail cars and locomotives requires that the standards be applied uniformly to all such pieces of equipment.

(9) *Effect on State and local noise control.* A major railroad industry association questioned whether the Agency has the authority to offer an opinion as to the preemptive effect of its regulations, and in particular, felt that, contrary to the Agency's stated position, the setting of Federal emission standards for locomotives and rail cars preempts every effort to control noise from that same equipment by local and State authorities, such as the required erection of noise barriers, or the regulation of overall railroad yard noise.

The EPA believes that the Noise Control Act of 1972 is clear in its contemplation that Federal and State governments work together in the control of noise. However, the Act also provides, in some cases, that the Federal authority be preemptive. The Agency therefore feels that it is proper for it to explain the extent of its regulations and to indicate the point beyond which the States and local governments may act; and that it is not prohibited from assisting the State and local governments by indicating ways in which the Agency believes they may augment its regulatory efforts. In addition the EPA's analysis indicates that, based on legal precedents, subsections 17(c) (1) and (2) provide only for the preemption of State and local regulations which set standards on the noise emissions of Federally regulated equipment

or facilities, or which have that effect by requiring the modification of such equipment or facilities, or the alteration of their use.

Another commenter indicated that State and local governments do not have the inclination or ability to determine the technical feasibility and cost of compliance of noise regulations and, therefore, the EPA is not acting in accordance with the instructions of Congress by encouraging such local initiative.

The Agency believes, as stated above, that the Congress did intend that the Federal and State authorities cooperate in the control of noise. Certain States, in particular California, and Illinois, have well established environmental agencies and have enacted and are enforcing comprehensive noise regulations. These States and others are clearly not devoid of technical and economic expertise. It appears to the Agency, therefore, that there is no fundamental reason why such States should not be permitted and encouraged to consider the technology available within relevant economic restraints to solve those noise problems peculiar to them that are not preempted by Federal regulatory action.

Numerous comments were received regarding special local conditions and the effects of Federal preemption on the relationship between State and local noise regulations and Federal noise regulations. Industry commenters felt strongly that there should be one uniform national standard that is totally preemptive. Some States and localities felt that "special local conditions" should be interpreted broadly, and some commenters felt that where stricter State and local standards were feasible they should not be preempted by Federal regulations.

Most of the comments received from local and State authorities asked that local regulation of noise be permitted to continue, and that they be allowed to attempt to control specialized noise problems such as night operations of trains which affect residential areas. Such local regulations are not necessarily prohibited by this regulatory action. The Agency has explained the nature of the preemptive effect of this regulation in another section of the preamble and feels that such explanation should serve as a guide to the future status of such State and local regulatory efforts.

(10) *Measurement methodology and enforcement regulations.* There were a number of comments from State and Local governments, private citizens, and industry relating to measurement methodologies and compliance procedures. Several recommendations were offered indicating that a measurement methodology specifying information such as allowable measurement equipment, site conditions, tolerances and measurement techniques should be incorporated into the regulation. Comments were also received concerning the measurement procedures published in the Background Document to the proposed regulation.

The proposed regulation did not include a detailed measurement methodology since it was contemplated that such would be included as part of the com-

pliance regulation to be promulgated by the Department of Transportation. Such measurement methodology, dealing with the enforcement aspects of railroad noise measurement, will still be developed by the Department of Transportation. The Agency, however, as a result of its own further analysis and after consideration of the questions and suggestions received during the public review process, has decided to incorporate additional measurement criteria into the standards as an added subpart of the final regulation being promulgated herein. Such measurement criteria contain specifications for ambient noise, wind noise, test site conditions, test equipment orientation, and other parameters necessary for the consistent and accurate measurement of the sound levels specified in the regulation.

This decision was made due to the complexity of the problem of accurately and fairly performing noise measurements of railroad equipment, and because the Agency felt it necessary to ensure that the standards within the regulation be fully and definitively specified so that there be no question as to the standards promulgated. The proper and complete definition of such standards is particularly critical with respect to railroad noise because there is no generally accepted measurement scheme in use nationally or throughout the affected industry unlike the situation in other industries subject to Federal noise regulation.

The Agency feels that it is acting properly in including the criteria as part of this final rulemaking without proposing them separately because the methodology from which such criteria were taken was published in the Background Document to the proposed regulation and was commented on as a result of the public review process. In addition, that methodology has since undergone thorough review by concerned Agencies of the Federal government, including the Department of Commerce/National Bureau of Standards, and the Department of Transportation/Federal Railroad Administration, and been revised by the EPA in response thereto.

A comment period, with respect to the additional criteria in Subpart C only, if 30 days from the date of publication of this regulation will be provided for those who have suggestions or questions regarding their provisions. Information concerning the procedural details of such correspondence is provided in a later section of the Preamble, entitled Future Public Comment.

One commenter indicated that the C scale would be more appropriate for this regulation than the A scale.

It has been argued that the A-weighted sound level discriminates against low frequencies and, thus, should be replaced by the C-weighted sound level. However, the ear also discriminates against low frequencies so that at low frequencies the sound pressure level must be comparatively high before it can even be heard. Since the correlations between A-weighted sound level and human response are consistently better than that

obtained with the C-weighted sound level, the EPA believes that the measurement procedures using the A scale on which these regulations are based are appropriate, and therefore, no change has been made.

Two commenters expressed concern over the 100 foot measuring distance and indicated that the specification of a 100 foot measuring distance in the standards is too far because such would require that too large an area be cleared for the necessary measurement site.

The Agency believes from the analyses used to develop the regulation and from its study associated with the development of additional measurement criteria that the 100 foot measuring distance does not appear to create significant problems with finding suitable sites for the measurement of the sound levels associated with any of the standards, and has therefore not changed such distance.

The Department of Transportation requested more than 270 days to develop compliance regulations due to the complexity of the nature of railroad noise control and because existing experience and expertise in the field are so limited.

The Agency is aware of the problems associated with the regulation of railroad noise and is concerned that adequate time be provided so that comprehensive and effective compliance regulations may be developed. While it has taken upon itself the development of detailed measurement criteria which are being incorporated as part of the final regulation, the Agency recognizes the need of the DOT for adequate time to develop the compliance regulation. Therefore in direct response to the request of the DOT, the effective date of the Best Maintenance Practice Standards has been changed from 270 days to 365 days from the date of promulgation.

The Agency realizes that unforeseen difficulties may occur and it will therefore attempt to work closely with the DOT in the development of the compliance regulations so that appropriate measures may be taken should such difficulties arise.

(11) *Background document data.* Specific questions were raised which dealt with the accuracy of facts and data presented in the Background Document to the proposed regulation.

A major locomotive manufacturer questioned the validity of the 6 dB(A) conversion factor for changing measurements made at 50 feet to an equivalent 100 foot value, due to the length of the locomotive.

Agency analysis indicates that any slight inaccuracy which may exist in the use of the 6 dB(A) conversion factor for the conversion of locomotive noise levels measured at 50 feet to 100 foot levels, is in fact a conservative error which understates the actual noise level as it would be recorded by a physical measurement at 100 feet. Accordingly, some of those locomotives whose noise levels have been measured in this manner, may emit actual noise levels at 100 feet which are in fact slightly lower than those levels described by EPA data which was converted from 50 feet. Such locomotives

may in fact require less quieting than is suggested by the 50 foot data, and as such may be more easily brought in compliance with the noise standards. The Agency emphasizes that any inaccuracy inherent in using the conversion factor is slight and has minimal effects upon the data so converted.

This same commenter stated that page 5.3 of the Background Document claims that mufflers will provide 6 dB(A) reduction of all locomotive noise levels. They further indicated that a 6 dB(A) reduction is not always possible, and that 87 dB(A) at 100 feet would be a better statement than a 6 dB(A) reduction.

The above comment appears to be due to an incorrect interpretation of the Background Document. The standards being promulgated by the EPA require an absolute noise level of 87 dB(A), not a net reduction of 6 dB(A). Specifically, the Background Document states: "Based on the considerations of available empirical data, an overall noise reduction of 6 dB(A) for the noisiest locomotives seems reasonable. Accordingly, the application of exhaust mufflers can be expected to permit all locomotives to achieve the following levels: Idle—67 dB(A) (now 70 dB(A); Overall Maximum 87 dB(A)."

This same commenter further indicated that based on the magnitude of the one-third octave band levels, the measurements on p. 4-13, Figure 4-2, appear to have been made at closer to five feet than 55 feet as specified when measuring the noise emissions of an EMD GP40-2 locomotive.

An investigation of Figure 4-2 in the Background Document does indicate that the recorded noise levels are inordinately high. These high readings are attributable to the increased projection of fan and casing radiated noise due to open engine access doors during the testing. However, the intent of this figure and its supporting discussion was not to quantify the absolute noise levels due to fan noise, but to demonstrate that fan noise is in fact an appreciable noise source. To quote from page 4-13 of the Background Document: "Since it was necessary to open the engine access doors during the measurements, the recorded levels are somewhat higher than would be generated under normal operating conditions. However, there is little doubt that cooling-fan operation can contribute significantly to overall levels." Although Figure 4-2 does not purport to accurately quantify cooling-fan noise levels under normal operating conditions, it does succeed in its primary purpose which is to demonstrate the relative significance of cooling-fan noise.

REVISION OF THE PROPOSED REGULATION PRIOR TO PROMULGATION

The Interstate Rail Carrier Noise Emission Regulation which is now being promulgated incorporates several changes from the proposed regulation which was published on July 3, 1974. These changes are based upon the public comments received and upon the continuing study of rail carrier noise by the Agency. In all but four instances, such

changes are not substantial; they are only intended to further clarify the intent of the regulation.

The first substantive change is that the more stringent longer range locomotive noise emission standards for both stationary and moving conditions will now apply only to those locomotives newly manufactured, effective December 31, 1979. These changes are reflected in §§ 201.11 and 201.12 of this regulation. These sections as originally proposed required the entire fleet of locomotives now in use to be in compliance with lower noise levels four years after promulgation of the final regulation. Because of the requirement for further identification of the applicability of "available technology," specifically as it applies to mufflers, and the reasonableness of such costs attendant to the application of that technology, the retrofit requirement for the existing locomotive fleet has been deleted. The Agency is continuing to assess the evolution of muffler technologies which may be applied to locomotives without incurring the significant restructuring costs required to install current muffler designs. At such time that the Agency determines that such muffler technology is available at reasonable cost, relative to the health and welfare benefits to be accrued, regulations requiring the retrofit of existing locomotives may be proposed.

The second substantive change to the regulation involves modifying the proposed locomotive idle standard by increasing allowable noise emissions from the proposed 67 dB(A) to 70 dB(A) at 100 feet. This change was made in order to accommodate new data which demonstrated that certain locomotive models appear to be incapable of compliance with a 67 dB(A) standard through the application of muffler technology alone, due to the dominant influence of structurally radiated noise during idle operation. The Agency has not been able to identify available technology to solve this problem in locomotives.

The third substantive change to the regulation is that the effective date of the initial standards has been changed from 270 days to 365 days from the date of promulgation in response to requests from the DOT.

The final substantive change to the regulation is the incorporation of additional measurement criteria into the standards as a separate Subpart C of the regulation. The noise emission standards specified in the Agency's regulations must be fully and definitively specified so that there is no question as to the EPA standard being promulgated. Accordingly, measurement criteria containing those conditions and parameters necessary for the consistent and accurate measurement of the sound levels specified have been included in the regulation being promulgated herein.

Those changes made to clarify the intent of the regulations and the reasons therefore, are as follows:

Section 201.1 Definitions. The definition of "sound level" was changed slightly to be consistent with the defini-

tion of that term as used in the document, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," issued by the Environmental Protection Agency in March 1974.

"Fast meter response" has been expanded for clarity.

"Interstate commerce" has been modified to insure that any questions as to its scope would be resolved by reference of Section 203(a) of the Interstate Commerce Act, consistent with the reference to that Act in section 17(b) of the Noise Control Act.

"Person" has been deleted since the word is no longer used in subpart B of the regulation.

"Sound pressure level" has been deleted since the words are no longer used in Subpart B of the regulation.

"Special track work" has been added in order to clarify the meaning of the term as used in the final regulation.

"Locomotive" has been expanded to include self-propelled rail passenger vehicles.

"Special purpose equipment" has been added in order to clarify the meaning of the term as used in the final regulation.

"Retarder" has been deleted since the word is no longer used in Subpart B of the regulation.

"Self load" has been deleted since the term is no longer used in Subpart B of the regulation.

"Idle" has been expanded in order to clarify the meaning of the term as used in the regulation.

"dBA" has been modified slightly to specify the reference pressure of 20 micropascals.

Section 201.10 Applicability. This section has been modified slightly to exclude the application of § 201.11 (a) and (b) to gas turbine powered locomotives and to any locomotive type which cannot be connected by any standard method to a load cell, and to more clearly specify the exclusion of intraurban mass transit systems in terms consistent with the definition of "carrier" cited in the Act. In addition the wording in the section has been modified to more clearly include the application of the standards to refrigeration and air conditioning units on locomotives and rail cars. Finally, the express exclusion of the applicability of the standards to railroad yards, shops, rights-of-way, or any other railroad equipment or facility not specified in the regulation has been deleted as unnecessary.

Section 201.11 and 201.12 Standards for locomotive operation under stationary and moving conditions, respectively. In addition to the applicability and effective date changes previously described, the reference to measurement site surface has been deleted and replaced by language referencing the measurement criteria in Subpart C of the regulation. Also the phrase "or the equivalent thereof" in reference to a load cell has been deleted.

Section 201.13 Standard for rail car operations. Track curvature require-

ments for measurement sites identical to those specified in § 201.12 for locomotives were incorporated into this section in addition to identical language referencing the measurement criteria of Subpart C as used in §§ 201.12 and 201.11 for locomotive test sites. Also, the language in the section was modified slightly so as to include for regulatory purposes the total sound emitted by rail cars while in motion, and to restrict compliance measurements to track free of special track work or bridges or trestles. The change in the effective date previously described also applies to this section.

PREEMPTION

Though the Noise Control Act speaks of preemption in unequivocal terms, the various sources of railroad noise are subject to such complex interrelationships that it is not possible to identify all regulations *a priori* as either preempted or not preempted. It is necessary to examine the regulation in question, the sources it purports to control, the activities to which it relates, and the reasonableness of the various alternative means of complying. As to those regulations that are subject to preemption, the preemptive effect may be waived under Section 17(c) (2) if the Administrator determines that the regulation is necessitated by special local conditions and is not in conflict with EPA regulations. It is anticipated that all such determinations as to not only special local conditions, but also the preempt status of State and local regulations impacting railroads would be handled by EPA. The Agency is currently preparing guidelines which will specify procedures to be followed by State and local governments where questions of the preemptive effect of Federal rail carrier noise regulations are at issue.

In view of the many comments received in response to the proposed regulation, the following discussion of preemption is intended to clarify the Agency's interpretation of the preemptive effect of the regulation here promulgated.

State and local governments can deal with railroad noise problems in several different ways. The first, the method adopted by EPA in this regulation, is to set emission standards on railroad equipment to reduce the noise produced at the source. Second, they can set noise emission standards on facilities where rail operations occur. A variation of this approach is the use of property line standards, where measurements are taken at the railroad property boundaries. Third, they can impose affirmative requirements on railroad equipment or facilities ("design" or "equipment" standards), such as the installation of mufflers on locomotives, the elimination of wheel flats on rail cars, or the construction of noise barriers along rights of way. A fourth possibility is to regulate, license, control or restrict the use, operation or movement of any equipment or facility, for example, prohibiting idling of locomotives on sidings within communities or prohibiting railroad yard operations be-

tween the hours of 10:00 p.m. and 6:00 a.m. Fifth, a State or community may set receiving land use standards for property which is impacted by railroad noise, for example requiring that noise levels at the property line of residential property not exceed 55 dB(A) Ldn. Each of these methods presents special problems which affect the determination of the preemptive relationship of the EPA railroad noise regulation.

Noise emission standards on railroad equipment. The Noise Control Act provides that after the effective date of the standards here promulgated for locomotives and rail cars, no State or local subdivision may adopt or enforce any noise emission standard on locomotives or rail cars unless it is identical to the Federal standard. They may adopt and enforce noise emission standards on other pieces of equipment not covered by EPA regulations, such as retarders and railroad construction equipment. They may also adopt standards for locomotives and rail cars if such standards are identical to the EPA standards.

Determining the preemptive effect of a noise emission standard is, however, complicated by the fact that a standard for total noise emissions from the operation of a piece of equipment may not differentiate between the elements which contribute to the noise. Where this is the case, the Administrator believes that where any given element of noise is either, (1) generated by a source that is an integral part of the federally regulated equipment, or, (2) is a component of the total noise generated by the federally regulated equipment, when operated under the conditions specified, the regulation of that element by State and local governments is subject to preemption. Specifically, these elements include the noise from refrigerator units on refrigerator cars, auxiliary power units on locomotives, and the noise caused by the condition of track. The noise caused by retarders, however, is a separate source of noise which will not be present during compliance measurement for the rail car standard, and as such is not subject to preemption.

Noise emission standards on railroad facilities. State and local governments may enact noise emission standards for facilities which EPA has not regulated. However, in the judgment of EPA, the preemptive purpose of Section 17 of the Noise Control Act requires that such regulations not be permitted to do indirectly what is specifically preempted. That is, State and local governments may not control the noise emissions of locomotives and rail cars by setting noise emission limits on yards where the noise limit is, in effect, a limit on locomotive and rail car noise. Noise emission standards may be adopted and enforced on facilities where rail cars and locomotives do not operate. Where federally regulated equipment is a noise contributor in a facility on which a State or local government proposes to set a noise emission standard, such as a marshalling yard, such regulation may or may not be preempted. If the only way compliance could reasonably be achieved were to

take actions the requirement of which is preempted by Federal regulations, then such standard is preempted. Questions concerning situations where alternative non-preempted means of compliance are available, as well as questions such as the availability and reasonableness of alternate means of compliance, will be dealt with by EPA under procedures now being developed to guide States and localities in dealing with railroad noise in light of Federal preemption.

Design or equipment standards. The Noise Control Act does not deal explicitly with regulations which require the installation of noise abatement devices or the application of specified maintenance or repair procedures. EPA believes that this is another area where the preemptive purpose of section 17 requires that the effect of State or local regulations on Federally regulated equipment or facilities be analyzed. The intended result of section 17(c) is that, except in cases where EPA has made a special determination, State noise regulations on locomotives or rail cars will not require that interstate rail carriers modify these Federally regulated pieces of equipment. Accordingly, EPA believes that design or equipment standards on federally regulated equipment—viz, locomotive and rail cars—are preempted. Design or equipment standards on other pieces of equipment, such as retarders or cribbing machines, are not preempted. Similarly, design standards on facilities not federally regulated are not preempted, even though locomotives and rail cars may operate there, because they do not require the modification of locomotives or rail cars. An example of this type of regulation would be a local ordinance requiring that noise barriers be installed along the rights of way running through that community.

Use, operation or movement controls. A reduction in community noise impact can be achieved in the manner, time or frequency of use of a noise source is controlled. Clearly, such controls may be adopted and enforced with respect to equipment that EPA has not regulated. However, with respect to Federally regulated equipment (locomotives and rail cars), such controls may not be imposed unless the Administrator has determined that such State or local regulation is necessitated by special local conditions and that it is not in conflict with EPA regulations. A use restriction on railroad facilities may be subject to such determination also, if in order to comply the railroad must control the use, operation or movement of federally regulated equipment within that facility. The determinations called for will be made by EPA in accordance with procedures which are now being developed.

Receiving land use standards. Receiving land use standards are to be distinguished from property line standards on the basis that property line standards focus on the identity of the noise source, such as railroad yards or rights of way, whereas receiving land use standards focus on the identity of the property receiving the sound, such as schools, hospitals or residential property. Obviously,

a community is not preempted from enacting such standards simply because it has a railroad within its jurisdiction. However, it is possible that a standard which says, for example, that no school may be exposed to exterior noise levels in excess of 55 dB(A), may require modification of locomotives or rail cars in a community where schools are close to the right of way of a railroad. Whether, or to what extent, such regulations are preempted, will be determined by EPA in accordance with procedures which are being developed.

COMPLIANCE PROCEDURES

Compliance regulations are to be developed and promulgated under separate rulemaking by the Department of Transportation.

BACKGROUND DOCUMENT

"Background Document and Environmental Explanation for the Proposed Interstate Rail Carrier Noise Regulation" was prepared prior to publication of the proposed regulation. This document has been revised and new data have been added. This new Document is quite lengthy, and it would be impractical to publish it in its entirety in the FEDERAL REGISTER. Copies may be obtained from the EPA Public Information Center, PM 215, Room 2104D, Waterside Mall, 4th and M Streets S.W., Washington, D.C. 20460. To the extent possible, the significant aspects of the material have been presented in summary form in the foregoing preamble. The topics contained in the Document are the following:

1. Statutory basis and regulatory procedure;
2. Data base for the regulations;
3. Background of the railroad industry;
4. Sources of railroad noise and consideration for Federal regulation;
5. General procedure to measure railroad noise;
6. Economic effects of a retrofit program;
7. Summary of what the regulation requires;
8. Environmental effects of the final regulation;
9. Economic effects of the final regulation;
10. Index of public comment on the proposed regulation; and
11. Appendices.

FUTURE PUBLIC COMMENT

As mentioned in the foregoing Agency responses to public comments, additional study may be required in a number of areas. EPA will evaluate the impact of these regulations after they become effective through monitoring and other activities, including evaluation of DOT and State enforcement data.

If as a result of government studies, or as the result of developments by industry or other institutions, it becomes evident to the Agency that more advanced technology is available at some reasonable cost within a prescribed compliance period, or that problems exist which curtail the effectiveness of the regulation, prompt revision of the regulation will be initiated. Accordingly, comments and

recommendations are solicited from all interested persons as to new or advanced technology and its projected cost, the effectiveness of the regulation, or on any other topic relevant to these regulations or revisions thereof. Prior to actual formulation of any revision to these regulations, notice of proposed rulemaking will be published so that there may be maximum contribution to the rulemaking developmental process by interested parties. Written data or views may be submitted to the Director, Standards and Regulations Division, the Office of Noise Abatement and Control (AW-571), U.S. Environmental Protection Agency, Washington, D.C. 20460.

In addition, as also referenced in the foregoing Agency responses to public comments, any person(s) having comments regarding the measurement criteria included in this final regulation may submit such comments to the Director, Standards and Regulations Division, the Office of Noise Abatement and Control, (AW-471), Docket No. ONAC 75-16, U.S. Environmental Protection Agency, Washington, D.C. 20460.

This regulation is promulgated under the authority of 42 U.S.C. 4916(a), 86 Stat. 1248.

Dated: December 31, 1975.

JOHN QUARLES,
Acting Administrator.

Subpart A—General Provisions

Sec. 201.1 Definitions.

Subpart B—Interstate Rail Carrier Operations Standards

- 201.10 Applicability.
- 201.11 Standard for locomotive operation under stationary condition.
- 201.12 Standard for locomotive operation under moving condition.
- 201.13 Standard for rail car operations.

Subpart C—Measurement Criteria

- 201.20 Applicability and purpose.
- 201.21 Quantities measured.
- 201.22 Measurement instrumentation.
- 201.23 Acoustical environment, weather conditions and background noise.
- 201.24 Procedures for the measurement of locomotive and rail car noise.

AUTHORITY: Noise Control Act of 1972, sec. 17(a), 86 Stat. 1248 (42 U.S.C. 4916(a)).

Subpart A—General Provisions

§ 201.1 Definitions.

As used in this part, all terms not defined herein shall have the meaning given them in the Act:

(a) "Act" means the Noise Control Act of 1972 (Pub. L. 92-574, 86 Stat. 1234).

(b) "Carrier" means a common carrier by railroad, or partly by railroad and partly by water, within the continental United States, subject to the Interstate Commerce Act, as amended, excluding street, suburban, and interurban electric railways unless operated as a part of a general railroad system of transportation.

(c) "dB(A)" is an abbreviation meaning A-weighted sound level in decibels, reference: 20 micropascals.

(d) "Fast meter response" means that the "fast" response of the sound level

meter shall be used. The fast dynamic response shall comply with the meter dynamic characteristics in paragraph 5.3 of the American National Standard Specification for Sound Level Meters, ANSI S1.4-1971. These publications are available from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018.

(e) "Interstate Commerce" means the commerce between any place in a State and any place in another state, or between places in the same State through another State, whether such commerce moves wholly by rail or partly by rail and partly by motor vehicle, express, or water. This definition of "interstate commerce" for purposes of this regulation is similar to the definition of "interstate commerce" in section 203(a) of the Interstate Commerce Act (49 U.S.C. 303(a)).

(f) "Load Cell" means a device external to the locomotive, of high electrical resistance, used in locomotive testing to simulate engine loading while the locomotive is stationary. (Electrical energy produced by the diesel generator is dissipated in the load cell resistors instead of the traction motors.)

(g) "Locomotive" means, for the purpose of this regulation, a self-propelled vehicle designed for and used on railroad tracks in the transport of rail cars, including self propelled rail passenger vehicles.

(h) "Rail Car" means a non-self-propelled vehicle designed for and used on railroad tracks.

(i) "Railroad" means all the roads in use by any common carrier operating a railroad, whether owned or operated under a contract, agreement, or lease.

(j) "Idle" means that condition where all engines capable of providing motive power to the locomotive are set at the lowest operating throttle position; and where all auxiliary non-motive power engines are not operating.

(k) "Special Purpose Equipment" means maintenance of way equipment which may be located on or operated from rail cars including: Ballast cribbing machines, ballast regulators, conditioners and scarifiers, bolt machines, brush cutters, compactors, concrete mixers, cranes and derricks, earth boring machines, electric welding machines, grinders, grouters, pile drivers, rail heaters, rail layers, sandblasters, snow plows, spike drivers, sprayers and other types of such maintenance of way equipment.

(l) "Sound level" means the quality in decibels measured by a sound level meter satisfying the requirements of American National Standards Specification for Sound Level Meters S1.4-1971.

This publication is available from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018.

(m) "Warning device" means sound emitting devices used to alert and warn people of the presence of railroad equipment.

(n) "Special track work" means track other than normal tie and ballast bolted or welded rail or containing devices such as retarders or switching mechanisms.

Subpart B—Interstate Rail Carrier Operations Standards

§ 201.10 Applicability.

The provisions of this subpart apply to all rail cars and all locomotives, except steam locomotives, operated or controlled by carriers as defined in Subpart A of this part, except that § 201.11 (a) and (b) do not apply to gas turbine-powered locomotives and to any locomotive type which cannot be connected by any standard method to a load cell. They apply to the total sound level emitted by rail cars and locomotives operated under the conditions specified, including the sound produced by refrigeration and air conditioning units which are an integral element of such equipment. These provisions do not apply to the sound emitted by a warning device, such as a horn, whistle or bell when operated for the purpose of safety. They do not apply to special purpose equipment which may be located on or operated from railcars; they do not apply to street, suburban or interurban electric railways unless operated as a part of a general railroad system of transportation.

§ 201.11 Standard for locomotive operation under stationary condition.

(a) Commencing December 31, 1976, no carrier subject to this regulation shall operate any locomotive to which this regulation is applicable and of which manufacture is completed on or before December 31, 1979, which produces sound levels in excess of 93 dB(A) at any throttle setting except idle, and 73 dB(A) at idle, when operated singly, connected to a load cell, and when measured in accordance with the criteria specified in Subpart C of this part with fast meter response at 30 meters (100 feet) from the geometric center of the locomotive and perpendicular to the centerline of the track.

(b) No carrier subject to this regulation shall operate any locomotive to which this regulation is applicable and of which manufacture is completed after December 31, 1979, which produces sound levels in excess of 87 dB(A) at any throttle setting except idle, and 70 dB(A) at idle, when operated singly, connected to a load cell, and when measured in accordance with the criteria specified in Subpart C of this part with fast meter response at 30 meters (100 feet) from the geometric center of the locomotive and perpendicular to the centerline of the track.

§ 201.12 Standard for locomotive operation under moving condition.

(a) Commencing December 31, 1976, no carrier subject to this regulation shall operate any locomotive or combination of locomotives to which this regulation is applicable and of which manufacture is completed on or before December 31, 1979, which produces sound levels in excess of 96 dB(A) when moving at any time or under any condition of grade, load, acceleration, or deceleration, when measured in accordance with the criteria specified in Subpart C of this regulation with fast meter response at 30 meters (100 feet) from the centerline of any sec-

tion of track which exhibits less than a two (2) degree curve (or a radius of curvature greater than 873 meters (2,865 feet)).

(b) No carrier subject to this regulation shall operate any locomotive or combination of locomotives to which this regulation is applicable and of which manufacture is completed after December 31, 1979, which produce sound levels in excess of 90 dB(A) when moving at any time or under any condition of grade, load, acceleration, or deceleration, when measured in accordance with the criteria as specified in Subpart C of this part with fast meter response at 30 meters (100 feet) from the centerline of any section of track which exhibits less than a two (2) degree curve (or a radius of curvature greater than 873 meters (2,865 feet)).

§ 201.13 Standard for rail car operations.

Effective December 31, 1976, no carrier subject to this regulation shall operate any rail car or combination of rail cars which while in motion produce sound levels in excess of (1) 88 dB(A) at rail car speeds up to and including 72 km/hr (45 mph); or (2) 93 dB(A) at rail car speeds greater than 72 km/hr (45 mph); when measured in accordance with the criteria specified in Subpart C of this part with fast meter response at 30 meters (100 feet) from the centerline of any section of track which is free of special track work or bridges or trestles and which exhibits less than a two (2) degree curve (or a radius of curvature greater than 873 meters (2,865 feet)).

Subpart C—Measurement Criteria

§ 201.20 Applicability and purpose.

The following criteria are applicable to and contain the necessary parameters and procedures for the measurement of the noise emission levels prescribed in the standards of Subpart B of this part. These criteria are specified in order to further clarify and define such standards.

§ 201.21 Quantities measured.

The quantities to be measured under the test conditions described below, are the A-weighted sound levels for fast meter response as defined in the American National Standard S1.4-1971.

§ 201.22 Measurement instrumentation.

(a) A sound level meter or alternate sound level measurement system that meets, as a minimum, all the requirements of American National Standard S1.4-1971 for a Type II instrument shall be used with the "fast" meter response characteristic.

(b) In conducting the sound level measurements, the general requirements and procedures of American National Standard S1.13-1971 shall be followed. This publication is available from the American National Standard Institute, Inc., 1430 Broadway, New York, New York 10018.

(c) A microphone wind-screen recommended by the manufacturer of the sound level meter or microphone of an

alternate sound level measurement system shall be used.

§ 201.23 Acoustical environment, weather conditions and background noise.

(a) The standard test site shall be such that the locomotive or train radiates sound into a free field over the ground plane. This condition may be considered fulfilled if the test site consists of an open space free of large, sound reflecting objects, such as barriers, hills, signboards, parked vehicles, locomotives or rail cars on adjacent tracks, bridges or buildings within the boundaries described by Figure 1, as well as conforms to the other requirements of this § 201.23.

(b) Within the complete test site, the top of at least one rail upon which the locomotive or train is located shall be visible (line of sight) from a position 4 feet above the ground at the microphone location, except as provided in paragraph (c) of this section.

(c) Ground cover such as vegetation, fenceposts, small trees, telephone poles, etc., shall be limited within the area in the test site between the vehicle under test and the measuring microphone such that 80 percent of the top of at least one rail along the entire test section of track be visible from a position 4 feet above the ground at the microphone location; except that no single obstruction shall account for more than 5 percent of the total allowable obstruction.

(d) The ground elevation at the microphone location shall be within plus 5 feet or minus 10 feet of the elevation of the top of the rail at the location in-line with the microphone.

(e) Within the test site, the track shall exhibit less than a 2 degree curve or a radius of curvature greater than 2,865 feet (873 meters). This paragraph shall not apply during a stationary test. The track shall be tie and ballast, free of special track work and bridges or trestles.

(f) Measurements shall not be made during precipitation.

(g) The maximum A-weighted fast response sound level observed at the test site immediately before and after the test shall be at least 10 dB(A) below the level measured during the test. For the locomotive and rail car pass-by tests this requirement applies before and after the train containing the rolling stock to be tested has passed. This background sound level measurement shall include the contribution from the operation of the load cell, if any, including contribution during test.

(h) Noise measurements may only be made if the measured wind velocity is 12 mph (19.3 kph) or less. Gust wind measurements of up to 20 mph (32.2 kph) are allowed.

§ 201.24 Procedures for the measurement of locomotive and rail car noise.

(a) *Microphone positions.* (1) The microphone shall be located within the test site according to the specifications given in the test procedures of paragraphs (b), (c) and (d) of this section, and shall be positioned 4 feet above the

ground. It shall be oriented with respect to the source in accordance with the manufacturer's recommendations.

(2) The observer shall not stand between the microphone and the source whose sound level is being measured.

(b) *Locomotive stationary test (load cell test).* (1) For stationary locomotive tests, the microphone shall be positioned on a line perpendicular to the track at a point 100 feet from the track centerline at the longitudinal midpoint of the locomotive.

(2) The sound level meter shall be observed for thirty seconds after the test throttle setting is established to assure operating stability. The maximum sound level observed during that time shall be utilized for compliance purposes.

(3) Measurement of locomotive noise shall be made with all cooling fans operating.

(c) *Rail car pass-by test.* (1) For rail car pass-by tests, the microphone shall be positioned on a line perpendicular to the track 100 feet from the track centerline.

(2) Rail car noise measurements shall be made when the locomotives have passed a distance of 500 feet or 10 rail cars beyond the point at the intersection of the track and the line which extends perpendicularly from the track to the microphone location, providing any other locomotives are also at least 500 feet or 10 rail car lengths away from the measuring point. The maximum sound level observed in this manner which exceeds the noise levels specified in § 201.13 shall be utilized for compliance purposes.

(3) Measurements shall be taken on reasonably well maintained tracks.

(4) Noise levels shall not be recorded if brake squeal is present during the test measurement.

(d) *Locomotive pass-by test.* (1) For locomotive pass-by tests, the microphone shall be positioned on a line perpendicular to the track at a point 100 feet from the track center line.

(2) The noise level shall be measured as the locomotive approaches and passes by the microphone location. The maximum noise level observed during this period shall be utilized for compliance purposes.

(3) Measurements shall be taken on reasonably well maintained tracks.

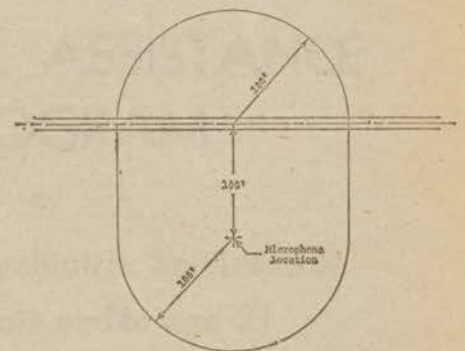


Figure 1. Test Site Clearance Requirement for Locomotive Stationary, Locomotive Pass-by, and Rail Car Pass-by Tests

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WEDNESDAY, JANUARY 14, 1976



PART IV:

HEALTH, EDUCATION, AND WELFARE DEPARTMENT

Social and Rehabilitation
Service



MEDICAL ASSISTANCE PROGRAM

Inpatient Psychiatric Services for
Individuals under age 21

Title 45—Public Welfare

CHAPTER II—SOCIAL AND REHABILITATION SERVICE (ASSISTANCE PROGRAMS), DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PART 249—SERVICES AND PAYMENT IN MEDICAL ASSISTANCE PROGRAMS

PART 250—ADMINISTRATION OF MEDICAL ASSISTANCE PROGRAMS

Inpatient Psychiatric Hospital Services for Individuals Under Age 21

Notice of proposed rulemaking was published on March 24, 1975 in the FEDERAL REGISTER (40 FR 13142), to implement section 1905(a)(16) of the Social Security Act which was added by section 299B of Pub. L. 92-603, the Social Security amendments of 1972. This statutory provision, specifying that States may provide inpatient psychiatric services for individuals under age 21, as an optional item of medical care in their State Medicaid plans, formed the basis of the proposed regulations. The statute also specifies that such services must involve active treatment, that an interdisciplinary team must provide admission certification and that States must assure maintenance of effort before claiming Federal financial participation.

The purpose of the proposed regulations was to set forth minimum requirements for providers of inpatient psychiatric hospital services that reflect the intent of the statute. Approximately 81 comments were received from national and State professional organizations, State health and welfare departments, providers and provider organizations and other interested individuals. Of these the greatest number came from providers. The major areas of concern were the requirements for a psychiatric hospital (this represented over half of the comments), admissions, plan of care and the interdisciplinary team. There were very few comments submitted on the maintenance of effort provision. Specific major concerns expressed and the Department's responses are as follows:

1. *Comment.* The requirement that psychiatric services to patients under 21 must be provided by an institution which is a psychiatric hospital accredited by the Joint Commission on Accreditation of Hospitals (JCAH) is too narrow an interpretation of the legislation. To confine Medicaid participation to psychiatric hospitals disregards the efforts many facilities have made to provide inpatient psychiatric care to individuals under 21 in an environment consistent with current health care delivery practices. Furthermore it was not the legislative intent to exclude facilities other than psychiatric hospitals.

Response. Throughout the regulations the word "hospital" has been changed to "facility". This includes any institution other than a hospital which provides inpatient care and is accredited as a psychiatric facility by JCAH.

2. *Comment.* The interdisciplinary team members should have some knowledge, experience or training in the area of child psychiatry; the doctoral clinical psychologist could perform the same

functions or have the same responsibilities as the physician; the certification of the psychologist requires clarification; and the team should function under the supervision of the physician.

Response. Section 249.10(b)(16)(iv)(c) provides that the interdisciplinary team should "preferably have training and experience in the area of child psychiatry." In a medical setting the responsibilities of the physician cannot be delegated to clinical psychologists. Section 249.10(b)(16)(v)(a)(3) provides that the psychologist may be certified by the State or the State psychological association, whichever is applicable. It is not appropriate to require physician supervision of the team, as patterns vary between institutions. However, the opening paragraph of § 249.10(b)(16) requires that "inpatient psychiatric hospital services" be provided under the direction of a physician.

3. *Comment.* There are problems which may occur when emergency admissions are done without the benefit of a team consultation.

Response. Section 249.10(b)(16)(iii)(d) requires that for emergency admissions the team responsible for the plan of care provides certification within 14 days after admission.

4. *Comment.* There were suggestions for specific word changes to further clarify the definition of plan of care.

Response. Section 249.10(b)(16)(iv)(a) includes clarification of the "active treatment" definition by replacing the word "deinstitutionalization" with a more descriptive phrase. In § 249.10(b)(16)(iv)(b) the word "behavioral" has been added to expand the elements of the diagnostic evaluation.

5. *Comment.* The maintenance of effort provision is too costly.

Response. This provision is based on the statute. In addition certain other clarifying or technical changes have been made in response to suggestions:

1. Section 249.10(b)(16)(iii) has been restructured for greater clarification of the admission requirements. The reference to the independent team provides for competence "preferably" in child psychiatry. Within 30 days of the effective date of the regulations, certification by the team responsible for the plan of care must be completed for individuals for whom services were provided prior to the effective date of the regulations.

2. A provision has been added to § 249.10(c)(5)(ii)(b) to clarify that the maintenance of effort requirement applies to facilities in the program which were providing inpatient psychiatric care in the base year even though they may not have met the requirements of § 249.10(b)(16) in that year.

3. Section 249.10(c)(5)(ii)(e) has been amended by deleting the phrase "other than title XIX or section 1115 of the Social Security Act" because the reimbursement to States for providing inpatient psychiatric hospital services to patients under 21 is contingent on meeting maintenance of effort requirements and there are no title XIX funds being paid to individual facilities. Thus the exclusion is unnecessary.

4. A statement has been added to § 249.10(b)(16)(iii) and (iv) to specify that requirements for admission certification and the development and review of a plan of care meet the utilization control requirements under § 250.18(a)(2) and (3) for physician certification/recertification and the establishment and periodic review of a plan of care.

5. The current regulations on upper limits for payment for skilled nursing facility, outpatient hospital and clinic services (§ 250.30(b)(3)(ii)) are being applied to reimbursement for these services; accordingly an appropriate change in the paragraph heading has been made.

Accordingly, the proposed regulations, as modified, are hereby adopted.

Chapter II, Title 45, of the Code of Federal Regulations is amended as set forth below:

1. Section 249.10 of Part 249 is amended by adding a new subparagraph (16) to paragraph (b) and amending paragraph (c), as set forth below:

§ 249.10 Amount, duration, and scope of medical assistance.

(b) Federal financial participation.

(16) Inpatient psychiatric facility services for individuals under the age of 21. For purposes of this subparagraph, "inpatient psychiatric facility services" include those items and services provided under the direction of a physician which meet the following conditions:

(i) in the case of any individual, such services are provided:

(a) Prior to the date such individual attains age 21, or

(b) In the case of an individual who was receiving such services in the period immediately preceding the date on which he attained age 21, prior to

(1) The date such individual no longer requires such services, or

(2) If earlier, the date such individual attains age 22.

(ii) Such services are provided by an institution which is a psychiatric facility accredited by the Joint Commission on Accreditation of Hospitals.

(iii) Such services are available only after certification that available alternative local community resources for ambulatory care do not meet the treatment needs of the individual, that the proper treatment of the individual's psychiatric condition requires such services on an inpatient basis under the direction of a physician and that such services can be reasonably expected to improve the individual's condition or prevent further regression so that such services will no longer be needed.

(a) For individuals admitted to a psychiatric facility in accordance with § 250.23 of this chapter after the effective date of these regulations and for whom claims are made from the date of admission such certification must be made by an independent team which must: Include a physician, have competence in the diagnosis and treatment of mental illness, preferably in the area of child psychiatry, and have knowledge of the individual patient situation.

(b) For individuals for whom such services were provided under an approved State plan prior to the effective date of this regulation such certification must be provided by the team responsible for the plan of care within 30 days of the effective date of this regulation.

(c) For individuals who subsequently make application while in the facility a certification by the team responsible for the plan of care must be provided and cover any period prior to application for which claims are to be made.

(d) For emergency admissions a certification must be provided by the team responsible for the plan of care (see subdivision (v)) within 14 days after admission.

(e) The admission certification by the review team required in this paragraph may be deemed to meet the requirement for physician certification as specified in paragraph (a)(2) of § 250.18 of this chapter.

(iv) In the case of any individual, such services involve active treatment.

(a) "Active treatment" for purposes of this paragraph (b)(16) means implementation and administration of a professionally developed and supervised individual plan of care, which plan shall be developed and implemented no later than 14 days after admission to the facility. The active treatment must be reasonably expected to improve the individual's condition to the extent that in-patient care is no longer necessary. The plan of care shall be designed to achieve the individual's discharge from inpatient status at the earliest possible time.

(b) "Individual plan of care" means a written plan, developed for each patient in accordance with § 250.23(a)(1) of this chapter for the purpose of improving the individual's condition to the extent that in-patient care is no longer necessary. The plan shall set forth treatment objectives and prescribe an integrated program of appropriate therapies, activities, and experiences designed to meet these objectives. It shall be formulated in consultation with the child and parents, legal guardians, or others to whose care or custody the individual will be released following discharge. The plan shall be based upon a diagnostic evaluation which includes examination of the medical, psychological, social, behavioral and developmental aspects of the patient's situation and reflects the need for inpatient psychiatric care which can be reasonably expected to improve the patient's condition to the extent that such care will become unnecessary. It shall include, at an appropriate time, post-discharge plans and coordination of inpatient services with partial discharge plans and appropriate related services in the patient's community, to ensure continuity of care with his family, school and community, upon discharge. Such plan shall be reviewed every 30 days by an interdisciplinary team (see subdivision (v)) for determinations that the services provided are or were required on an inpatient basis and for recommendations as to necessary adjustments in the plan as indicated by the

individual's overall adjustment as an inpatient. The development and review of the plan of care required in this subparagraph may be deemed to meet the requirement for physician recertification as specified in paragraph (a)(2) of § 250.18 of this chapter and for the establishment and periodic review of a plan of care as specified in paragraph (a)(3)(ii) of § 250.18 of this chapter.

(c) "Professionally developed" means the plan is formulated by an interdisciplinary team of physicians and other personnel who are employed by or render services to patients in the facility and who, by virtue of education and experience, preferably including competence in the area of child psychiatry have the capability of assessing the patient's immediate and long range therapeutic requirements, developmental priorities, personal strengths and liabilities, and the potential resources of the patient's family; of setting treatment objectives; and of prescribing the therapeutic modalities through which these objectives are to be achieved, and, therefore, are qualified to make determinations with respect to mental health conditions and the treatment thereof.

(v) For purposes of subdivision (iv) of this subparagraph, the interdisciplinary team shall include at least:

(a) (1) A Board eligible or Board certified psychiatrist, or

(2) A clinical psychologist who holds a doctoral degree and a physician licensed to practice medicine or osteopathy, or

(3) A physician licensed to practice medicine or osteopathy with specialized training and experience in the diagnosis and treatment of mental diseases and a psychologist who holds a master's degree in clinical psychology or who has attained recognition of competency through certification by the State or by the State psychological association; and

(b) One of the following (deemed to be other professionals qualified to make determinations with respect to mental health conditions and the treatment thereof):

(1) A psychiatric social worker;

(2) A registered nurse who has specialized training in or one year of experience in treating the mentally ill;

(3) An occupational therapist who, where applicable, is licensed in the State, and who has specialized training or one year of experience in treating the mentally ill; or

(4) A psychologist as defined in subdivision (v)(a)(3) of this subparagraph.

(c) *Limitations.* (1) Federal financial participation in expenditures for medical and remedial care and services listed in paragraph (b) of this section is not available with respect to any individual who is an inmate of a public institution (except as a patient in a medical institution or as a resident of an intermediate care facility), or any individual who has not attained 65 years of age and who is a patient in an institution for tuberculosis or mental diseases (except for an individual under age 22 who is receiving

inpatient psychiatric facility services pursuant to paragraph (b)(16) of this section).

(2) Payments to institutions for the mentally retarded or persons with related conditions and to psychiatric facilities providing inpatient facility services to individuals under age 21 may not include reimbursement for vocational training and educational activities; and

(5) With respect to expenditures in any calendar quarter, Federal financial participation for inpatient psychiatric facility services for individuals under the age of 21 is available only to the extent that the total expenditures for such inpatient services included under paragraph (b)(16) of this section for individuals receiving assistance under the State plan, and of active psychiatric care and treatment provided on an outpatient basis to mentally ill individuals under age 21 receiving assistance under the State plan in the current quarter exceeds the sum of:

(i) The product of the total number of eligible individuals receiving such inpatient services in the current quarter times the average quarterly per capita non-Federal expenditures for the base year, and

(ii) The average non-Federal quarterly expenditures for the base year for outpatient psychiatric facility services for eligible individuals under the age of 21. Federal financial participation will be at 100 percent of such increase in expenditures over the base year period but may not exceed the Federal medical assistance percentage times the expenditures for inpatient psychiatric hospital services for individuals under the age of 21 included under paragraph (b)(16) of this section. For purposes of this subparagraph:

(a) The base year shall be the 4-quarter period ending December 31, 1971;

(b) The per capita per quarter non-Federal expenditures for the base year and the expenditures for each subsequent year in which claims are made are those expenditures for inpatient care and services in psychiatric facilities determined in accordance with reimbursement principles applied under title XVIII-A of the Act; (Facilities which were providing such services for individuals 21 and under and receiving State aid during the base year which did not then meet the requirements of paragraph (b)(16) of this section but which participate in the program under paragraph (b)(16) of this section must be included in the maintenance of effort computation);

(c) The number of eligible individuals receiving inpatient psychiatric facility services in the current quarter means the number of different persons receiving care for the whole quarter plus the full quarter equivalent number for persons receiving less than a full quarter's care. In determining the per capita expenditures for the base year, similar methods of computation shall be used;

(d) Non-Federal expenditures means the total amount of the funds expended

by the State and the political subdivisions thereof, excluding any Federal funds received directly or indirectly;

(e) Expenditures for the current calendar quarter excludes Federal funds received directly or indirectly from any source.

(f) As a basis for determining the proper amount of Federal payments, each participating State must submit estimated and actual cost data and other information necessary for this purpose in such form and at such times as are specified in regulations in this chapter and Social and Rehabilitation Service guidelines; and

(g) the single State agency shall have on file adequate records to substantiate compliance with the requirements of this subparagraph and to assure that all necessary adjustments have been made.

2. Section 250.23 of Part 250 is amended by revising paragraphs (a) and (b) and adding a new paragraph (c) as set forth below:

§ 250.23 Periodic medical review and medical inspections in skilled nursing facilities and institutions for mental diseases.

(a) *State plan requirements; medical review.* A State plan for medical assistance under title XIX of the Social Security Act must:

(1) Provide, with respect to patients eligible under the State plan who are admitted to a skilled nursing facility or who make application while in such a facility, for a medical review (including medical evaluation) of the need for care in such a facility, a written plan of care and, where applicable, a plan of rehabilitation; and if the State plan includes medical assistance in behalf of individuals 65 years of age or older, in institutions for mental diseases or under age 21 in psychiatric facilities, provide, with respect to patients eligible under the State plan who are admitted to or make application while in a mental hospital or psychiatric facility, for a medical review (including medical evaluation) of the need for such care, and a written plan of care. Such a review and plans would be made by the patient's attending physician with respect to care in skilled nursing facilities, and by the attending physician or staff physician with respect to care in mental hospitals, for individuals age 65 or over. In the case of individuals under age 21 who are admitted to psychiatric facilities, the review must be made by a team in accordance with § 249.10(b)(16)(iii)(b), and the plan of care must be made by a team as specified in § 249.10(b)(16)(v). Provisions required by this subparagraph shall include descriptions of methods and procedures to be followed in each case which assure that prior to admission or prior to authorization of payments, as may be appropriate:

(i) Each patient receives a complete medical evaluation which includes diagnoses, summary of present medical findings, medical history, mental and physical functional capacity, prognosis and

an explicit recommendation by the physician with respect to admission to, or, in the case of persons who make application while inpatients in a skilled nursing facility or mental hospital, continued care in, such skilled nursing facility or mental hospital;

(ii) The plan of care includes diagnosis, symptoms, complaint(s), and/or complications indicating the need for admission, a description of the functional level of the patient; written objectives; orders (as appropriate) for medications, treatment, restorative and rehabilitative services, therapies, activities, social services, diet, and special procedures recommended for the health and safety of the patient; and plans for continuing care (including provisions for review and necessary modification of the plan) and discharge;

(iii) In the case of skilled nursing facility patients, written reports of the evaluation and the written plan of care are delivered to the facility and entered in the patient's record at the time of admission or, in the case of patients already in the facility, immediately upon completion; and

(iv) In the case of patients in mental hospitals or in skilled nursing facilities which are in institutions for mental diseases, the evaluation also includes psychiatric and social evaluations which are entered in the patient's record at the time of admission or immediately upon completion;

(2) Provide for periodic inspections to be made in all skilled nursing facilities (and, if the State plan includes medical assistance for individuals 65 years of age or older or individuals under age 21, who are patients in institutions for mental diseases, in each such institution) caring for patients under the plan by one or more medical review teams which shall

(i) Be composed of one or more physicians and other appropriate health and social service personnel; or in the case of teams reviewing care in institutions for mental diseases, one or more psychiatrists or physicians knowledgeable about mental institutions and other appropriate mental health and social service personnel;

(ii) Function under the supervision of a physician on the team;

(iii) Have no members who are employed by or have any financial interest in any nursing home (or, in the case of teams reviewing care in institutions for mental diseases, have a financial interest in any such institution or are employed by an institution for mental diseases reviewed by the team of which they are members);

(3) Provide for methods and procedures which assure that:

(i) A sufficient number of teams exists and they are so distributed within the State that on-site inspections can be made in all skilled nursing facilities (and institutions for mental diseases) caring for patients under the plan at appropriate intervals;

(ii) No physician member of a team inspects the care of patients for whom he is the attending physician;

(iii) At least one inspection by a medical review team is made in each skilled nursing facility or institution for mental diseases at intervals to be determined by the team for each facility or institution on the basis of consideration of the quality of care being rendered therein and the conditions of patients thereof receiving service under the plan, but not less often than annually;

(iv) No such facility or institution is notified of the time of an inspection more than 48 hours before the arrival of the medical review team; and

(v) The medical review team inspection includes for skilled nursing facility patients and for individuals under age 21 in institutions for mental diseases personal contact with and observation of each patient receiving assistance under the plan by a team member or members, and review of each such patient's medical record. In the case of patients 65 years of age or older in institutions for mental diseases, the inspection includes review of each such patient's medical record, if such record contains complete reports of periodic assessments required by section 1902(a)(20) of the Social Security Act, or if such reports are not available or are found to be inadequate, personal contact with and observation of each such patient. Such reviews and observations are to determine the adequacy of the services available to meet the current health needs and promote the optimal physical, mental, and psychosocial functioning of patients, the necessity and desirability of the continued placement of such patients in such facilities or institutions, and the feasibility of meeting their health needs through alternative institutional or noninstitutional services, and in the case of individuals under age 21 in institutions for mental diseases whether such services involve active treatment. Under this requirement, such determinations may be based upon consideration of such items as whether:

(a) The medical evaluation and plan of care for each patient are complete and current, the plan of care (and, where applicable, the plan of rehabilitation) is being followed and all services ordered (including dietary orders) are being rendered and properly recorded,

(b) Prescribed medications have been reviewed by the attending physician at least every 30 days, and tests or observations of patients indicated by their medication regimen have been made at appropriate times and properly recorded,

(c) Physician, nurse, and other professional progress notes are made as required and appear to be consistent with the observed condition of the patient,

(d) Adequate services are being rendered each patient as evidenced by such observations as cleanliness, absence of decubiti, absence of signs of malnutrition or dehydration, and apparent maintenance of optimal physical, mental and psychosocial function,

(e) The patient currently requires any service not available in or actually being furnished by the particular facility or institution or through arrangements with others, and

(f) Each patient actually needs continued placement in the facility or institution or there is an appropriate plan to transfer the patient to an alternate method of care;

(4) Provide for methods and procedures which assure that:

(i) A full and complete report on each inspection visit is promptly submitted by the medical review team to the single State agency covering the observations, conclusions and recommendations of the team with respect to the adequacy and quality of all patient services in the facility or institution (including physician services to medical assistance patients in the facility) as well as specific findings with respect to individual patients;

(ii) The single State agency forwards a copy of each inspection report both to the facility or institution involved and its functioning utilization review committee, to the agency of the State responsible for licensure, and to the agencies responsible for certification or approval of the facilities involved for purposes of title XVIII or XIX, and to other agencies of the State which require the information in such reports in the performance of their official functions including, in the case of inspection reports on institutions for mental diseases, the appropriate State mental health authorities, and

(iii) Reports and recommendations are followed by appropriate action on the part of the single State agency.

(b) *Coordination of utilization review and medical review.* Periodic medical inspections by medical review teams as

required by paragraph (a) of this section may be conducted by noninstitution based utilization review committees where the composition of such a committee meets the requirements of paragraph (a) (2) of this section, or is modified or supplemented to meet such requirements for purposes of its medical review activities, and where such committee is willing and able to undertake in addition to its regular utilization review program the on-site inspection functions required by paragraph (a) (3) of this section.

(c) *Coordination of independent professional review and medical review.* Periodic inspections by medical review teams as required by paragraph (a) of this section may be conducted by independent professional review teams where the composition of such a team meets the requirements of paragraph (a) (2) of this section or is modified or supplemented to meet such requirements for purposes of its medical review activities and where such independent professional review team is willing and able to undertake in addition to its regular independent professional review program the on-site inspection functions required by paragraph (a) (3) of this section.

3. The heading of § 250.30(b) (3) (ii) is revised as follows:

§ 250.30 Reasonable charges.

* * * * *

(b) *Upper limits.* * * *

(3) *Other services.* * * *

(ii) *Skilled nursing facility services, outpatient hospital services, other inpatient and outpatient facility services,*

and clinic services. Customary charges which are reasonable. Schedules of payments established by the State agency shall not exceed the combined payments received by providers (for furnishing comparable services under comparable circumstances) from the intermediaries or carriers under title XVIII and beneficiaries under title XVIII of the Social Security Act. Schedules will be acceptable if within the upper limits either on a facility by facility basis or on the basis of average payments according to a reasonable classification of facilities based on levels of care. (In the case of providers which are not participating under title XVIII, a financial audit of the facilities to apply the title XVIII-A reimbursement principles is not required but the State shall establish schedules of charges which are consistent with the intent that upper limits do not exceed amounts paid under title XVIII-A for similar services.)

(Sec. 1102, 49 Stat. 647 (42 U.S.C. 1302))

Effective date. The regulations in this section will be effective April 13, 1976.

(Catalog of Federal Domestic Assistance Program No. 13.714, Medical Assistance Program)

Dated: October 10, 1975.

JOHN A. SVAHN,
Acting Administrator, Social
and Rehabilitation Service.

Approved: January 2, 1976.

MARJORIE LYNCH,
Acting Secretary.

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